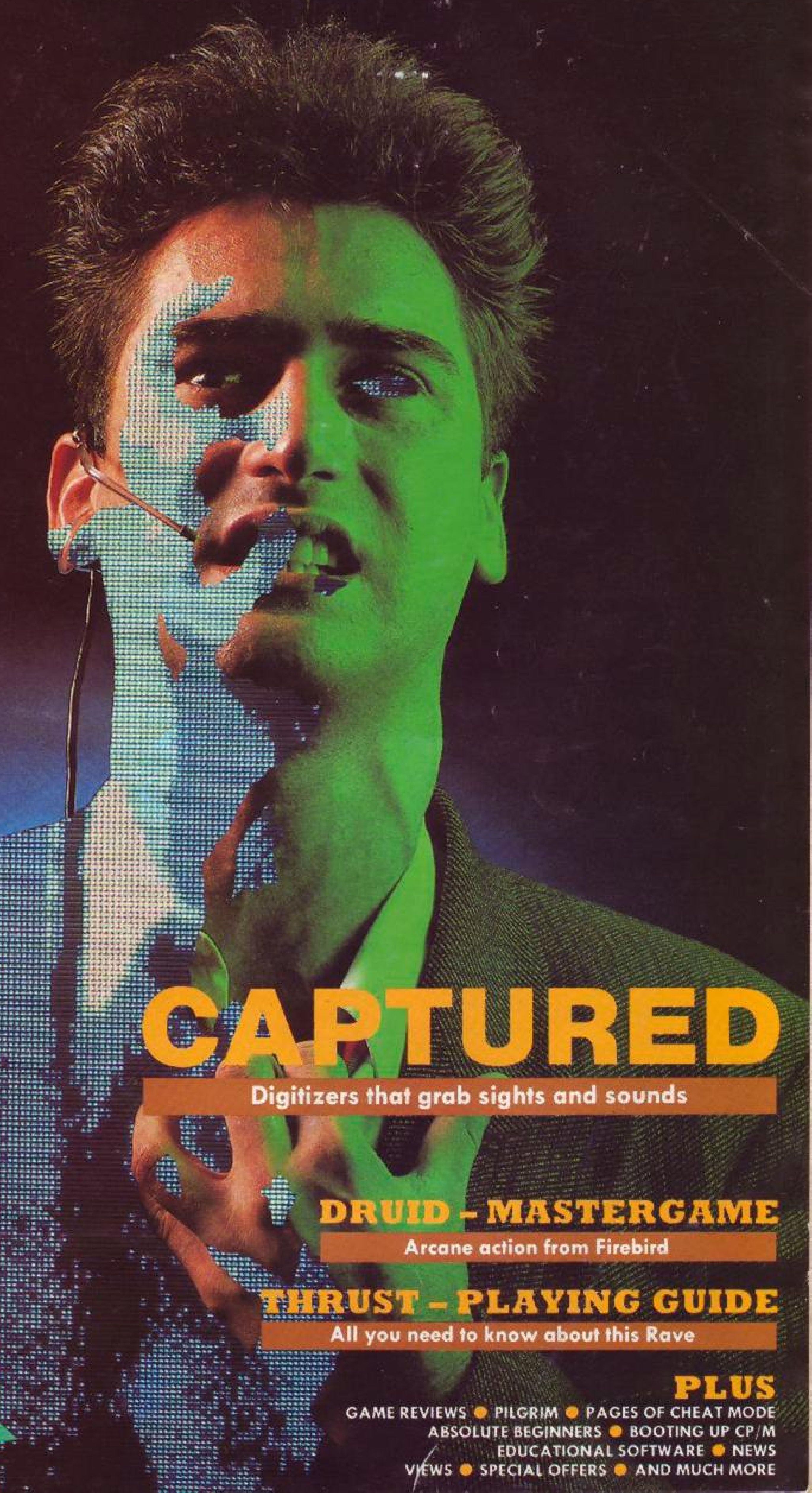
BRITAIN'S ONLY MAGAZINE DEVOTED TO THE AMSTRAD CPC 464, 664 AND 6128

No. 15 DECEMBER 1986 £1.00

NOT an official Amstrad publication!!

AMSTRAD ACTION

THE MOULD-BREAKING MAGAZINE FROM FUTURE PUBLISHING



CAPTURED

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AMSTRAD ACTION DECEMBER 1986

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DIGITIZING SPECIAL

MOUTH, EYES AND EARS FOR ARNOLD



SERIOUS SIDE

REVIEWS ● ARTICLES ● PROFILES

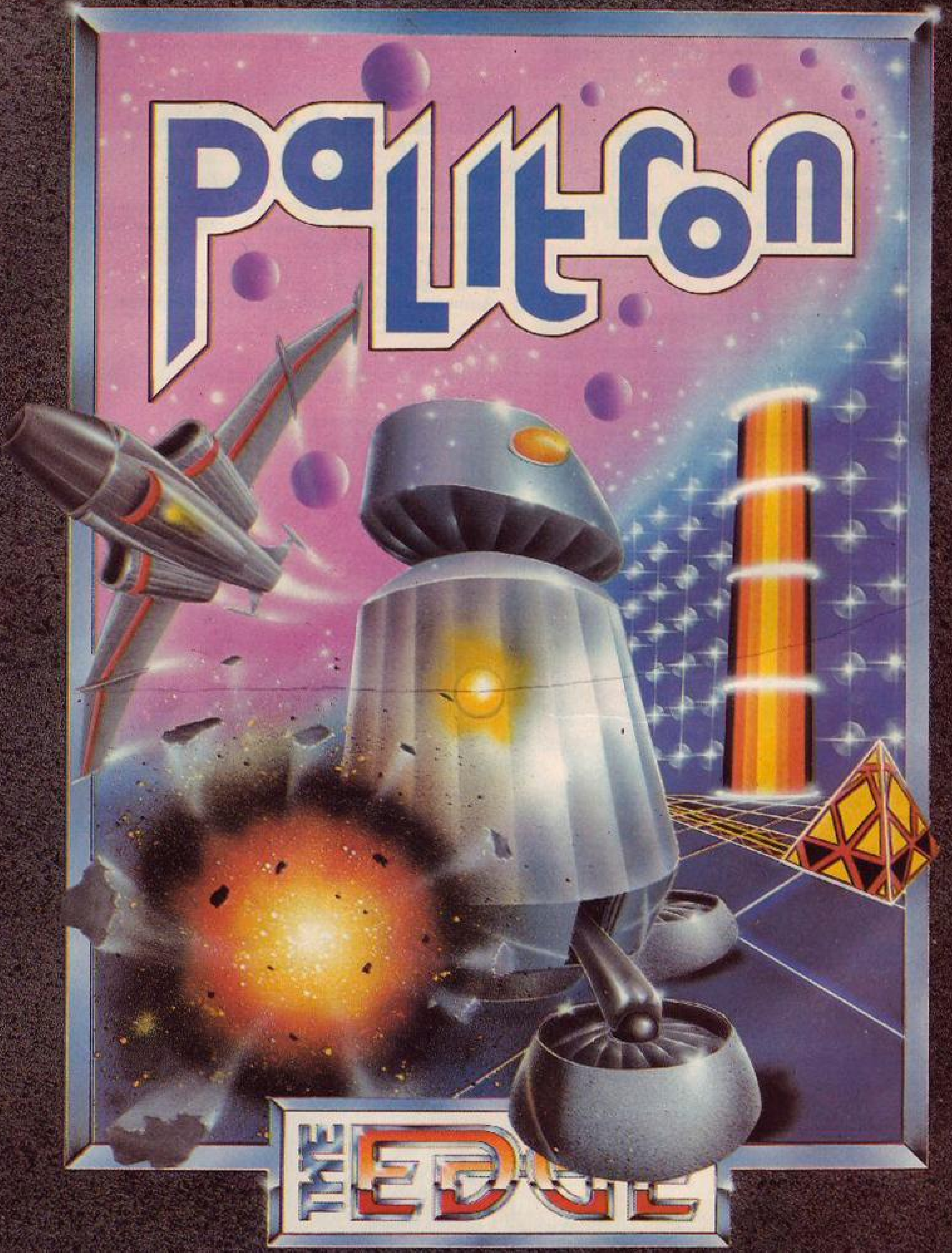
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New faces at the Old Barn

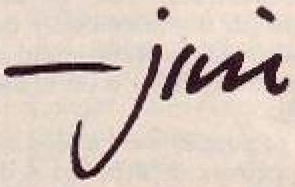
Future Publishing will soon have to raise a new barn if this population explosion persists. *Amstrad Action* started 16 months ago with a staff of three. Today 18 people produce three magazines here.

Speaking of rising rapidly, hasn't your new editor? I'm **Jim Nagel**, who joined two months ago as sub, and have now taken over the chair vacated by *Matt Nicholson*. Matt is still here – he's in the next stall editing the new *PC Plus*. He gets his own stapler this month, and won't just be a supplement inside *8000 Plus*.

Richard Monteiro comes to *AA* after losing his A-levels to Arnold. He is our new technical editor, having gained his expertise when he should have been preparing for exams. We were so impressed with Richard's sound digitizer when he came for interview that it's our cover-feature type-in. And guess who's our coverboy? Talk about fast fame.

Andy Wilton has left Somerton for the metropolis to get his name in lights: you'll see it in the Amstrad section of Micronet. He's a technical writer there. This is one reason our Prestel mailbox – the number is on this page – is getting more use now. Andy's articles for Basic beginners will continue to appear in *AA* for the next month or two.

Upstairs at the Old Barn, **Kim Bale** has joined the art team. She's a graduate of Plymouth Poly and formerly worked freelance from home in Sherborne while looking after a baby. Now father freelances and tends two-year-old Timmy. Kim replaces *George Murphy*, who departed the drawingboard for the bright lights of Bristol.



Who was on show?

Our stand at the Amstrad Show last month (see report in Amscene) was often overcrowded with avid readers of *Amstrad Action*. It was a pleasure meeting you all, and I'm sorry there was not enough time to chat to everyone. Well, we have discovered our readers come in all sizes, shapes and ages – and I suppose you discovered the same about us!

Game to help?

Amstrad Action is looking for an assistant games reviewer. The right person must live near enough to Somerton to be able to call in at the office at least once a week, and must be able to write to the exacting standards of *AA* English – remuneration accordingly. If you think you fill the bill, send the editor two sample game reviews.

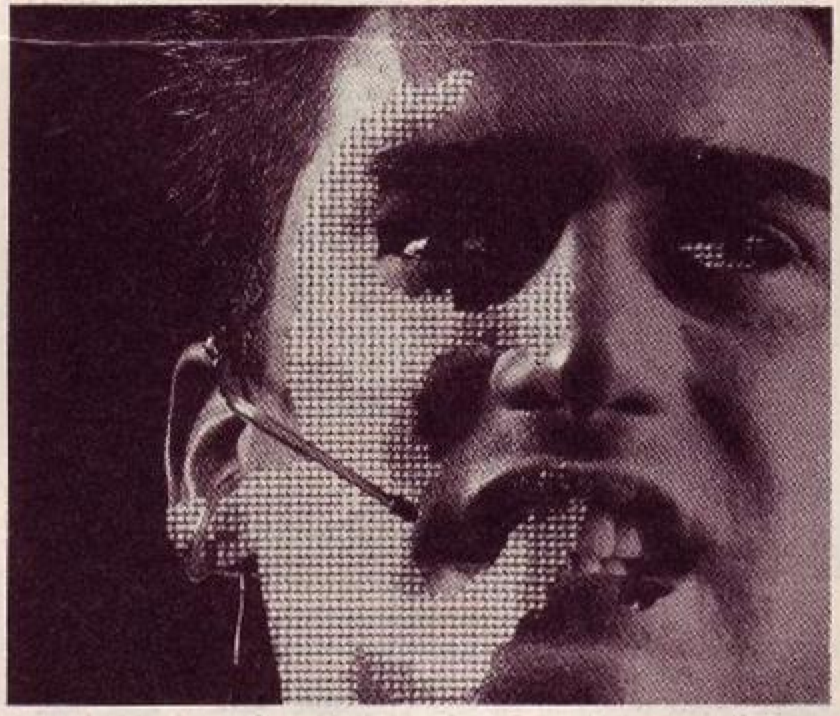
Cheat yourself

And dep.ed. Bob Wade asks Edlines to remind you yet again that Cheat Mode cannot answer individual letters asking for help with games – even if they bribe him with a stamped envelope begging a reply. We wouldn't want to spoil the fun for you, nor would we have enough month left to make your mega-mag.

Digital conjuring on the cover

This month's cover is a bit of magic by Trevor and team, don't you think? It was done by first photographing Richard with an ordinary camera. They put the resulting colour transparency onto a lightbox and focussed a video camera on it. Thus two identical images were produced, one analogue and one digital. Wessex, our colour originators, then blended one into the other for the final result you see up front.

We'd like to thank British Telecom at Bristol for loaning us the Auralite headset you see – also Thorn-EMI of Wells for another one you don't. And Linnet Photographic and Technical Services Ltd (Midas Audio-Visual) of Langport, Somerset, for the video camera that did the seeing.



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Vera Cruz winners

Five readers have won copies of the whodunnit game from Infogrames as prizes in our September competition.

They are P Dowling of Maidenhead, Andrew Gray of Manchester, Paul Sweetman of New Malden, Arthur Marquez of Leeds and PA Rodgers of Rotherham. Another long list of runners-up will receive £3 vouchers.

RE-ACTION

The Old Barn's postbag is bursting again this month. Thanks for the effort you put into these epistles – we're only sorry we can't print more. Thanks too for your comments on the mag and suggestions for improvement: you might be surprised next month to see some of your ideas in print even if your letter doesn't appear here.

Keep 'em coming – and remember, brief is best.

Brummies and soldiers form Amstrad groups

I am in the process of forming a users club in Birmingham. Could those interested please write to me? We hope we won't have to charge anything to join. We also hope to have access to a university which uses 6128s.

John B Woods
54 Lockwood Road
Northfield, Birmingham
B31 1QD

I wonder if I might use your pages to let Armed Forces Amstrad users know of the formation of the Services Amstrad Society. Recent research shows there are well over 5,000 privately owned Amstrads in use in the three services, and I suspect the figure could be nearer 25,000, such is the success of thse outstanding machines.

The Services Amstrad Society will bring together all thse users and provide a forum for the exchange of ideas, help with problems, and a united voice to deal with softwre houses and our own masters.

Any serviceman requiring further details of the society should write to me enclosing an sae. The Services Amstrad Society is being run by servicemen for servicemen.

C M Joint (Lt-Col)
Services Amstrad Society
Leros TA Centre, Sturry Road
Canterbury, Kent
CT1 1HS

Why not small ads?

I have subscribed to AA since issue 1 and I think it's pure genius. Could I make one small helpful suggestion – that you reserve one or two pages per month for a selection of readers' advertisements. For a small charge (or if you're really generous, free) readers could advertise things they want to swap or sell.

A lot of people can't afford £200 for a printer or £100 for a disk drive. For example I would be willing to swap 10 to 15 £10 *AA*-Rave games – original, uncopied – for a CPC 464 printer or disk drive.

Peter Day
33 Drummond Road
Birmingham, B9 5XJ

At the moment, Peter, we haven't got the staff to cope with the admin it would entail. Also, small ads for swapping software open up temptation for illegal copying. Like other magazines, we want to avoid that. As for hardware, we're printing your address this time.

3 ch!eRs for tape

Yes, you have got a great mag, but so many people must have told you that you're going to get big-headed if you're not careful.

Why is everyone so anxious to give the poor old cassette the shove? The hardware is cheaper than a disk drive, a cassette is cheaper than a disk, and most of us lesser mortals can't afford the prices. Maybe you could do a census to find out how many of your readers do own disk drives.

And can anyone come up with a poke to turn that blasted music off in *Elite?*

Alex Gough
Hastings, E Sussex

We make regular use of a Harvey Headbanger *hat to keep our egos from over-expanding – though they have good cause. Cassettes are slow and unreliable, that's why. We agree, they are cheap. But the price of disk drives is coming down all the time.*

If you can't bear the music, why don't you just use the volume control?



"YOU'LL LIKE OUR EDITOR– HE'S AN UNASSUMING BLOKE..."

Loader lament

I join the multitude of people complaining about foreign loaders. I am not too bothered about headerless loaders because on my system (6128 and tape-recorder) most headerless programs work. But the Firebird loaders are terrible. I have not yet got one of them to work. I have *Thrust, Harvey Headbanger* and *Spikey Harold*, and you can't buy these programs on disk. It is all right if you have a built-in tape but if not it's hell.

I know they've got to keep ahead of the pirates, but does it have to be at the expense of us? Could you please say in your reviews if these loaders cause problems on a 6128 or 664?

Anthony Beck
South Humberside

The problem lies with the azimuth adjustment on your tapedeck. Firebird's loader is particularly finicky. See this month's Problem Attic, page 34.

Whodunnit?

I have seen the *Fourth Protocol* game reviewed (October AA) and I like the idea of it. But I have read the book and I wonder, will the characters whodunnit in the book be the same in the game? In other words, will I know who it is immediately?

Amyas Stephens
Farnham, Surrey

To be honest, we don't know because none of us have read the book. But even if you have, you will still find the game a challenge.

Leaderboardless

What news of the to-be-released *Leader-board* for Arnold? US Gold was rather noncommital at the PCW Show, despite the flashy stand. The Amstrad version wasn't even on the pricelist.

Peter Newman
Co. Tyrone

Still waiting for it, still working on it. A technical hitch, apparently.

It's even simpler

After waiting ages to get the disk version of Viper's *Big-League Soccer II* from you (because of delays at the software house) it finally arrived. However, there was a serious problem: the 'Save game' option does not function. I have tried all ways – so have others – but it is no good. As you prob-

Penpals, please

▶ **Michael Mellin, 4 Camden St, Nelson, Lancs, BB9 0BL.**

▶ **Paul Mackenzie, 39 Millerssneek Ave, Lenzie, Scotland, G66 5HP.**

▶ **Robert White, 1 Sunnybank St, Ossett, Wakefield, W Yorks, WF5 8PE,** is 14 and has a 6128.

▶ **Chris Barbon, Caretakers House, Whitstable CJ School, Oxford St, Whitstable, Kent, CT5 2DB,** is 15 and has a 464 with lightpen.

▶ **Jonathan Eland, 7 Stannard Well Drive, Horbury, Wakefield, W Yorks, WF4 6BN** wants to organize 'the country's latest and greatest penpal club'.

▶ **Wayne Gol, 111 Saxon Dr, London, W3 0NY** (01-993 6851) would love to know Arnold owners in the Ealing-Acton area.



ably realise, unless you keep the computer on for weeks, the game is much less enjoyable for me, let alone the kids – impossible to finish.
Jenny Randles
Warrington, Cheshire

The problem in the disk version ofSoccer II is an error in the instructions, according to a Viper man. Don't 'Insert a blank disk' or 'the saved-game disk'. Simply use the **same** *disk the program is on.*

Pre-Arnold peruser

I am very new to the wonderful world of the Arnold. In fact I haven't even bought it yet. I am going to buy the 6128 in a couple of months, and already I am reading your great magazine.
When are you going to do a review on the *Graphics Adventure Creator Plus?* I think this might be the first program I buy.

A suggestion: Why don't you devote a page of the mag for Arnolders to write in and ask other users for unwanted games etc, and also advertise their unwanted software and hardware? Some users may want to sell some games or even swap them.
Mancj Mistry
Leicester

We look forward to publishing your type-ins when you finally do get your machine! Watch out for the Pilgrim's comments on GAC+. *He looked at the original version in January. As for small-ads, see the next letter.*
(Apologies, by the way, MM, if we've misspelt your name. No hassles reading the rest of your very neat handwriting, but your signature stymied us.)



"YOU'LL HAVE TO PRESS E KEYS A BIT HARDER..."

Remind me

Why cannot some expert produce a list of memory cost for each 6128 command as was done for the Spectrum? Or am I the only person with a 6128 who did not pay the inflated price just to play games?
Clive Southee
Basingstoke, Hants

Two books reviewed in the November issue contain just the sort of table you're after.

Getting back up

I am once again annoyed to find 'Booting CP/M' and 'Absolute Beginners' plus the music articles (October) printed back-to-back. This fouls up my system of taking out these articles for reference: they can't be separated. Why not alter the layout to split them by a page of ads, as most other mags do?

This is the only real moan I have about your mag, which more than covers everything an Amstrad owner needs. Congrats on your new mag *8000 Plus*, which I ordered this morning.
John Wallwork
Warrington, Cheshire

Your new ed actually tried to please you this issue, keeping AB and CPM separate. But then along came eight more last-minute pages and an unbelievable repeat performance of juggling colour pages, ads, sequence, left vs right. John, I'll send you 5p to photocopy the back of one page.

Carve name in stone

Isn't it amazing how dense you can be if you really try? J P Eldridge wrote to you (October) complaining about your review of *Nuclear Heist* and asked you to print the author's name in a review. You replied that it's often difficult to tell who wrote a game. Mr E was writing to tell you who wrote the game: *he* did. What he wants is the name of the author of the review so he knows whose legs to break.
The review seemed fair enough to me.
Can we see a comprehensive collation of *Elite* tips? Those of us who waited for the disk version have just completed the first mission, are dangerous and are wondering how the second mission starts. I note that another mag that still runs high-scores has claims for hundreds of thousands of credits. Is there any point pursuing cash or trying to keep a clean record? I thought the rating depended purely on this.
D J Edwards
Leeds

Some programmers might not want their names carved on AA gRavestones. But in future we'll include an author's name in a review if it's printed on the package (as Jone Paul's was, spelt like that, now that we look). In most cases nowadays, however, there is no one name. Often it's a team rather than an individual. Frequently Amstrad games are conversions from other machines: the original author has never touched an Amstrad, and the converting programmer has never had an original thought.

Invisible bowl



Could you please tell me when *Superbowl* will be released? The game has been advertised since December and most recently in the advert 'Heroes and Villains' along with *Rambo, Batman* and *V*, which are all available. It has been out for some time on the Spectrum and Commodore, and the two-player game is excellent. It's a shame that a good software house lets consumers down by not releasing the games advertised till six months to a year later. I'm thinking of *Street Hawk* and *Knight Rider*.
David and Michael Pidduck
Broadstairs, Kent

A spokesman at Ocean said the conversion had to be abandoned because of unforeseen and unsurmountable programming difficulties. You're right about 'teaser' advertising; you can believe it's out when you read our review. We take Ocean and all the others with a grain of salt.

Pets for sale

We have bought a new big memory-fast Amstrad, and the difference is remarkable for our vast range of bridge administration programs. Anyone want a Commodore set of working kit? No reasonable offer refused for the hardware and extensive software: Commodore 3032 with double disk drive and tractor printer, 4032 with single drive and printer – £750 the lot.
Bernard Brighton
Sheffield Bridge Club
7 Thornsett Road
Sheffield, S7 1NA

Welcome to Amstrad Action, Bernard. Something tells me, though, you're advertising in the wrong mag.

Points for Re-actors:

- PRINT your name clearly if you want us to spell it right. You should see some of the signatures we get!
- A telephone number might be useful in case we need to check something before printing your letter.
- Please don't expect individual replies, especially on games problems – we get just too many letters and would have no time left to put out your favourite mega-mag.
- If you have points for various departments (eg. Pilgrim, Type-ins, Subscriptions, Mail-order) please write them them on separate sheets of paper. Some members of the AA team are free-range – they are not confined to stalls in the Old Barn. So if you expect one bit of paper to be shared round, I'm afraid you multiply the chances of it getting lost. Make sure your name and address is on each, but you can post them all in one envelope.



Confounded comms

I am impressed by your 'Day in the Life' (November) and note one glaring omission from your magazine. You mention your communcations equipment and its problems. However, despite scanning my past issues, I cannot detect one single word or article on the subject of comms. With the widening range of modems and the software to run them, it becomes more necessary to the Amstrad user to acquire more knowledge about this means of talking to each other.

I use a modem because I am disabled. It beats CB radio

any day, despite the telephone bills. Actually, it costs about 50 pence per hour in the evening. That's not so bad when you consider you can talk with people all over the country and even the world. You can get free programs and even more games.

If I could find your mailbox number printed in the magazine I could have sent this to you electronically instead of using the post office. So how about a regular spot?

Gil Matthews
Rochester, Kent

You'll now notice our Prestel mailbox number on the Edlines page. But via it you wouldn't have got this letter into print, because haven't yet been able to get text from there into our wordprocessor without more work than it's worth. But stay tuned; we're practising.



Captured by aliens

With *Aliens: the computer game* on the horizon, people are giving second opinions on the first game *Alien*. I have many very good games in my collection, including *Marsport* and *Herbert's Dummy Run*, but nothing gets my blood going like playing *Alien*. People disliked it because it wasn't an arcade game or an adventure, it doesn't even involve much strategy – just do whatever is necessary to kill the blasted thing! But what it does involve is suspense and tension. After playing it I am a nail-less nervous wreck ready to be strapped into my bed for the night. It is the best buy I ever made for a micro: ZX81, Dragon or CPC.

Although the film *Aliens* wasn't as good as the first one, the computer game could be a nail-biter of epic proportions. I hope that Electric Dreams is up to the task. Meanwhile I thank Argus Press and look forward to saving lovely Ripley from hordes of double-jaws!

Sebastian Aston
London W2

An Action taskforce is blasting off to W2 to rescue Sebaston from the aliens forcing him to write this.

Abandoned Aberdonian

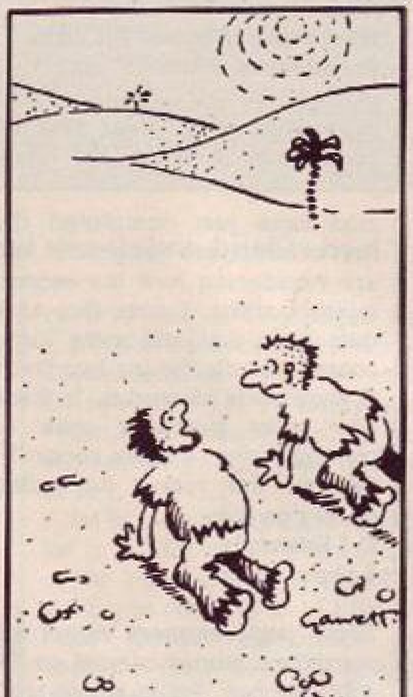
It is a constant disappointment that I can't get any of the current software you review. I'm not just complaining about Aberdeen, but also Glasgow and Edinburgh, both cities that I visit on a fairly regular basis for my work.

All the software advertisements are for companies in the Midlands and the South of England. It's just not possible to travel 300 to 500 miles south to view a new software program, including games.

Could your magazine help out on this? Do a survey of shops in Scotland and the North of England and compare it with the Midlands and the South.

William Snell
Aberdeen

This is surprising, in view of this month's north-of-the-border cover feature. And if you feel far away, just look at the next letter.



"I KEEP THINKING IT'S JUST AN ADVENTURE GAME ON MY AMSTRAD"

Kiwi kudos

Wow! What a mag! It's only the third issue I've received, and I'm hooked. I've stopped my *ACUs* so I can get *the* Amstrad mag.

But now the sad part. In New Zealand it costs the equivalent of £3! It takes three months to receive an issue [on the newsstands]. By the time it gets here any competitions have been entered, awarded and forgotten. We miss out on any freebies. (Have you a spare copy of *Covenant* going begging?) And finally, there's only a 1-in-2 chance of picking up an issue.

Most of these cannot be helped by *AA*, but you could make overseas competitions where we have four or five months leeway.

Shane Morgan
Auckland

A copy of Covenant *is on its way down under, Shane. And a copy of this issue air-mail so you won't miss seeing your name in it. Bug us again in a few months' time about your competition idea; it has merit.*

Take a butcher's

Beef up the magazine! In the last six issues there has been a general decline in the number of pages. Do something about it.

Julian Cater
London SW14

Aye, aye, sir! Editor reports there are 116 pages this issue.

Part of the reason for drop in page count two and three months ago was the departure of Joyce to her own title, 8000 Plus. Now, even though Amstrad Action *is devoted exclusively to Arnold, only issue 7 out-beefed the one in your meathooks, sir.*

Happy reader offers goodies

When I first got my 6128 I took a quick glance at the 7-million-page manual. I quickly found *AA* and read it instead. My 6128 no longer seemed like a UFO – more than I can say for the two other computers (Texas Instruments and Sinclair Spectrum) I had before. I hope you keep up the brill work.

To show my gratitude, any reader wanting a poster and window-sticker or two (free!) from various software houses should write me. The day I receive a large self-addressed stamped envelope is the day I will send the posters off.

Readers in the northwest of England will know me as Soft-Byte Enterprises (as seen on Granada Reports).

Colin Rickwood (age 15)
189 Skipton Road
Colne, Lancs.
BB8 0NY

No sleep on Mars

After drawing a large map and spending a lot of time blasting sept warriors, I am stuck on *Marsport*. Many of the new problem areas that I have found are proving too much for my single brain cell. I wonder if you or any of your readers could please tell me how to enter the chemists, plant room, hothouse, or how to enter (safely) the danger rooms where sonic booms and radiation bombs are activated. I would be delighted if someone had the solutions to these problems because I've been losing sleep not knowing the answers.

Matthew Holley
65 Lansdowne Lane
London SE7 8TN

Better brew more black coffee, Matthew: you won't get the solutions from us. If we answered all the letters we get about games, we would spoil the fun for other readers, not to mention have no month left to write a megamag. But your situation sounds so serious we are printing your address for a possible pen-pal to rescue you.

If the name flits

I was looking through the games at my local computer shop. *Splitting Images* was £5.95 and the same game under the title *Split Personalities* was £8.95. Do we pay £3 for a different cassette cover?

Can any mad idiot sell me AA issues 1, 2 and 3? If anybody writes, state how much I have to pay.

Michael Mellin
4 Camden Street
Nelson, Lancs.
BB9 0BL

Domark had to withdraw Splitting Images *because it raised L with the TV puppets. The game was re-issued with the revised title. Recommended retail price either way was £9 (less the obligatory bob), so if you saw it for £6 your local retailer was offering a bargain.*

The Old Barn still has back issues of AA 3 in stock, but we're now out of issues 1 and 2.

Questions in Eire

What is a 'cloaking device' in the *Elite* tip (Cheat Mode, AA11)?

What is the meaning of 81% for *Jack the Nipper?* I would buy it right now except for your rating. It's original, funny, witty, and yet 81%.

Re-Action is slowly but surely shrinking. Please stop. If this continues, we'll be able to say nothing.

To software marketing people: give Ireland a break! I live near the towns of Mitchelstown and Fermoy. I went into two shops selling software: 'Sorry, we don't stock Amstrad software.' We have to travel 32 miles to Cork to get overpriced software at rip-off prices. One Irish pound is worth 80p sterling, and VAT here is 35%.

And to mail-order advertisers: 'Europe 70p for post and packing' doesn't mean much to Irish users. Does UK mean Great Britain or the British Isles as a whole?

Mark Dowling
Castlemartyr, Co. Cork

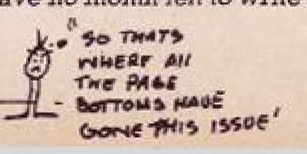
The cloaking device is something you can pick up from a special mission in Elite, *to make your ship invisible.*

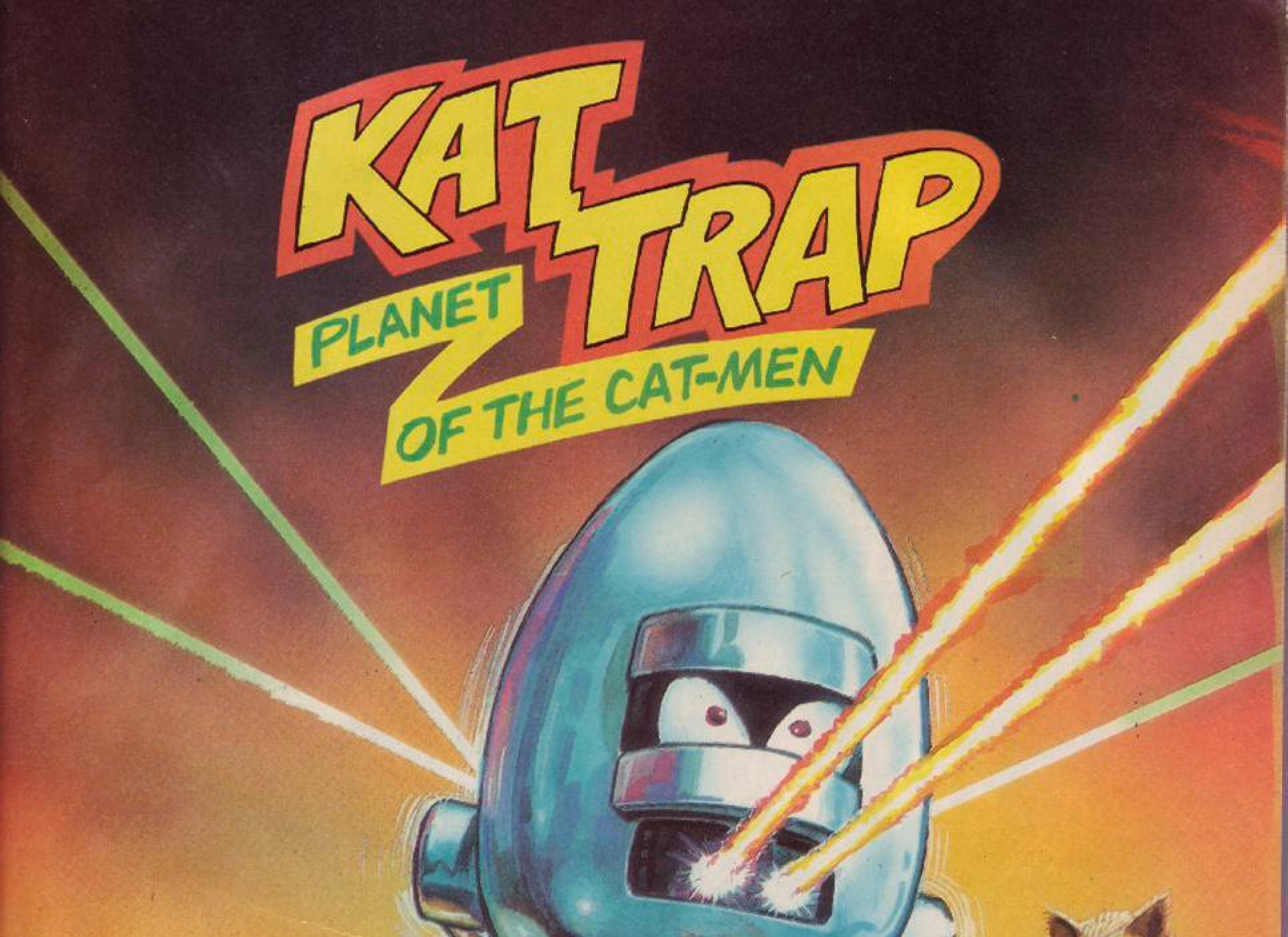
At 81% the kiddie psychopath got an AA Rave. What more do you want?

If anything Re-Action will be growing in future. We're even printing your letter, Mark (albeit somewhat shrunken – but you did rather blarney on).

If you can't persuade your







Kat Trap is the winner of the "Crash Magazine" 'Genesis' competition. This game was selected out of 4000 entries and has been programmed by the top rated Design Design team, (need we say more).

Spectrum 48/128
Amstrad CPC **£8.95**

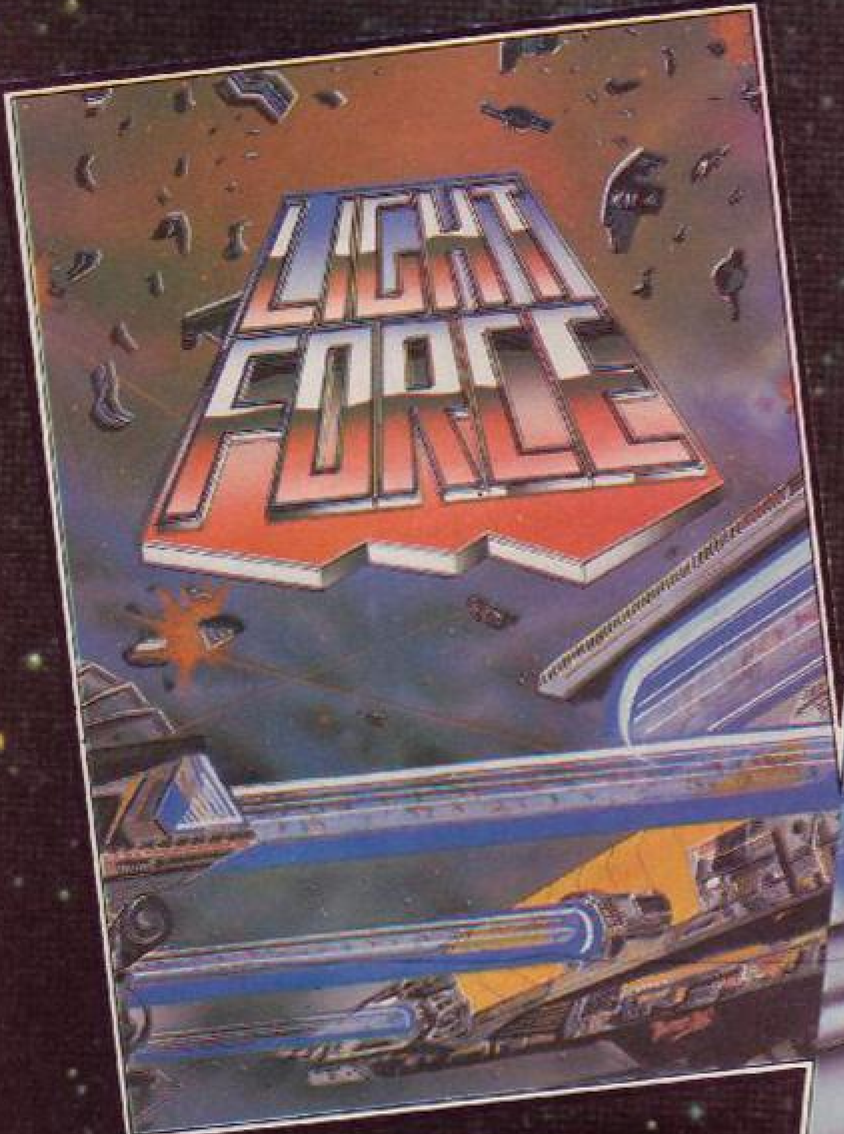
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Streetwise

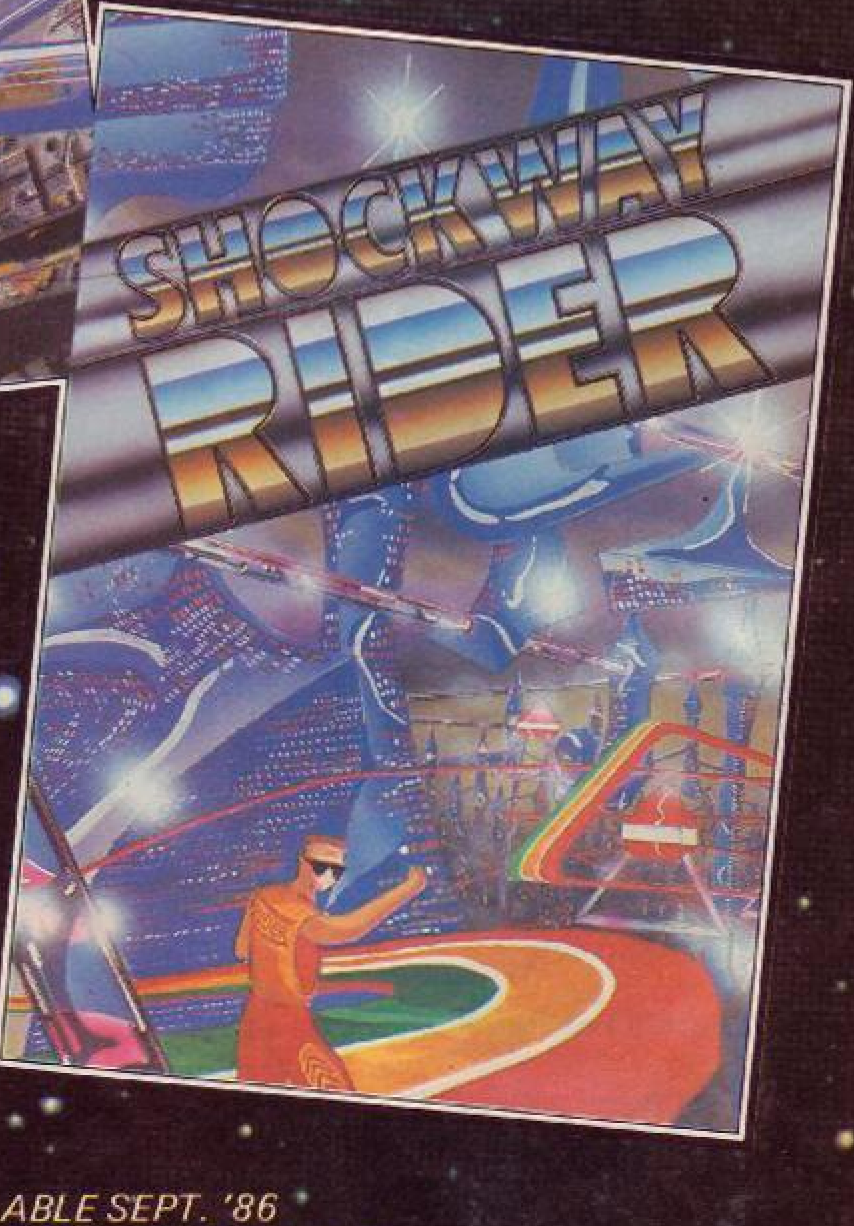
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local shops to stock Amstrad software, mail-order sounds your best bet.

Finding out whether Eire post is charged at the UK rate or the Europe rate led to a rather Irish situation (or is the word Eurocratic?) when we rang the GPO in four different areas. When you asked, letters could be posted to Southern Ireland at the inland rate, even though it is not part of the UK. Eire, however, is now part of the EEC. New rates go into effect on 20 October, but GPO headquarters had not yet told its districts how much. It's most unlikely they will be less.

We agree with you that advertisements could be worded more specifically.

Won, but waiting

Thank you for such a wonderful mag. A special thanks to the Action Test, which is first-class. I will not purchase a game without first looking at it.

Please can you explain why I have not yet received my prize from the *Fighting Fit* competition of July's issue of *AA*? I get a great pleasure in doing all your comps, and never won except this.

S Fowell
Dagenham, Essex

I noticed in your September issue that I had won your *Fighting Fit* competition. Unfortunately there has been nothing through my letterbox to confirm this – ie. a prize. Does this mean our beloved post office has once again muffed it or have you not sent them out yet?

Rob Mundin
Portsmouth

We confess. The delay in sending the FF prizes was our fault. We sent the list of winners' addresses to Melbourne House in mid-September, who sent it on to their warehouse for mailing. You should have received your kung-fu disk by the time you read this. We're taking action to make our admin as wonderful as Action Test.

And for the heads among you awaiting your Harvey Headbanger *hats, Firebird is seeing to it.*

Parallels multiply

I read with interest Mr Tyte's letter (Reaction, October) about the supposed similarity between Mastertronic's *Radzone* and Amsoft's *Scout Steps Out*. I really don't see why he picked on these games. Has he never noticed any similarity between games such as *Alien 8* and *Knightlore*, those in Amsoft's *Roland* series, the *Wally* saga, and of course all the recent *Marble Madness* clones?

I actually own both *Radzone* and *Scout*, so I am not just going from screen shots. None of the 13 screens of *Scout* are repeated in *Radzone*'s 42 screens, nor are any of the tunes similar. *Radzone* also has sprite-plane effects, redefinable keys, bar-graphs etc.

The only similarity I can see is that both have the same distinctive graphic style, and that the authors' names are the same!

Dean Covil
Bootle, Merseyside



"I KEEP THINKING THAT I'VE SOLVED 'DOOMDARK'S REVENGE'"

Design a desk

I have owned an Amstrad CPC 464 since September 1984 and am very happy with it. As time went by I decided to expand the system. Now I have the micro and green screen plus a light-pen and joystick and DMP 2000 printer. I am having problems fitting all of this hardware onto the table. So I need a new desk.

I have looked around and I cannot find one which will suit Arnold. Most of the desks which are supposedly Amstrad compatible have the keyboard on one level and the monitor high above. Now Arnold gets annoyed when his VDU friend is too far away, so he pulls out the power connector to spite the owner. The Amstrad really needs a large flat table for the keyboard and monitor and a plinth (optional) for a printer – I enclose an example sketch.

Could you tell me if such a desk exists?

Trevor Atkin
Kexby, Lincs

Yes, Arnold is rather too attached to the monitor. We bought some extension cables at the Amstrad Show to make room for serial interface, rom boxes and all the things that come between them. Perhaps there's a woodworker among our readers who'd like to draw up do-it-yourself plans for an ideal Arnold desk, to be published in a later issue.

Tell me another

I think you *can* scrap your hi-score table. Don't you think it's an opportunity just to let people lie? But you won't listen so I'll tell you I've made $30,250 on *Gunfright* and killed two gangs and two other cowboys, so print that.

Richard Potter
Telford, Shropshire

Sounds like you've been printing money.

Moral issue – more

Liam McMaster says (Reaction, October) that 'young children will play the game, and so nuclear annihilation will become a casual thing.' He ends his letter: 'Think about it!'

I wonder if *he* has ever thought of all the 'killing' and 'dying' which play such a large part in so many computer and other games. You start the game with a certain number of 'lives' and then proceed to destroy or kill the aliens or whatever. When you make a mistake you lose 'lives' until 'No lives left' or 'Game over' – ie. you are dead. Isn't *this* treating life and death casually?

If a child is being brought up to respect and value all forms of life, he or she should regard this as fantasy. Surely we all have a liking for a certain amount of fantasy.

I'm opposed to most forms of censorship for adults, whether it be computer games, books, films or whatever.

I'm not a parent (I'm a 44-year-old single woman – no children) but I do feel that parents should do their best to bring their children up to respect life (their own and other people's) and things, and to teach their children to think for themselves.

With the exception of chess I don't think that young children (ie. under 12 or so) should play computer war games. Most children of this age are simply not mature enough to realise the implications of the battle they are fighting, were it to be real.

The thinking-for-themselves bit comes when their friends have the game – *Theatre Europe* or whatever: if they don't like it they should be able to say so and get support from their parents. We live in a nuclear age so children *will* ask parents and other adults difficult questions – children have been asking their parents awkward questions since time began!

I'd like to add that I play a fairly wide variety of games on my CPC464: arcade, adventure, shoot-em-ups. I also enjoy playing about with graphics and music, although I am no computer buff. I also occasionally play war games.

But my approach to the few war games I possess is more serious and thoughtful than to *Starstrike II* or *Sorcery!*

Perhaps we *all* should work out what we think about nuclear energy and weapons.

Jean Benford
London SW2

I bet Liam McMaster has sat at home and enjoyed watching films such as *Rambo, Firefox, The Third World War* and many James Bond films. PSS does state in the instruction booklet to *Theatre Europe* that war is bad; the game was made so as not to degenerate into nuclear ping-pong. Mr McMaster should ring (0203) 66 8405 and listen!

Anyway, megazine, I find that your Mastergame varies too much: one month an adventure, next a war game, then a shoot-em-up etc. Perhaps you should have a mastergame in each different category.

R Heaney
Edinburgh

There just aren't enough games released every month to have more than one Mastergame. There may be months were nothing rates the title. So the award is for the one best game overall. Besides, variety is the spice of life, all text and no shooting makes R a dull boy, etc.

Dummies blame Toot

Cheat Mode in August printed a poke for infinite lives on *Herbert's Dummy Run*. After typing it in and trying to load the game with no luck, I decided to look at the rest of the pokes. 'Ah!' I said, 'a poke for *The Covenant*. That's strange; this looks familiar.' No wonder. It was the exact same poke as the one for *HDR*. I typed it in and tried *The Covenant*. It worked perfectly. So what happened to the poke for *Herbert's Dummy Run*. Please, please could you print it as I can't seem to get anywhere with the game.

Eric Campbell
Wirral, Merseyside

Sorry, Eric. Toot was helping Trevor paste up that page and hid Herbert's dummy. We haven't been able to find it since. Dummies are we.

AMSCENE

Games on the way from North Pole programmers

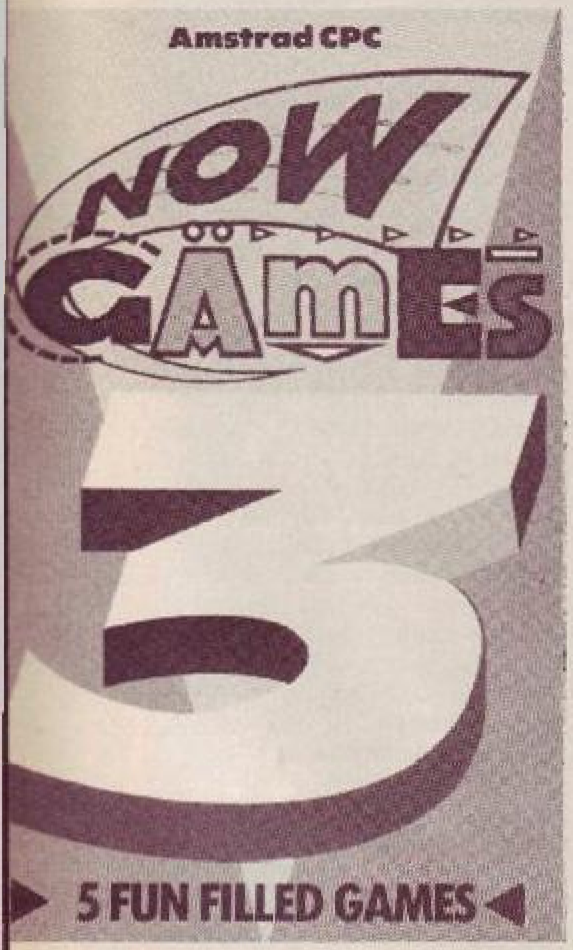
You lucky lot are in for a very hot Christmas. Some of the games appearing look very exciting indeed. You thought you had seen the lot – you ain't seen nothing yet.

No Amstrad owners in their right mind will want to miss *Heartland* – one look at this arcade adventure from Odin and, at just under £10, you will be screaming for it. Absolutely astounding graphics and ... You'll just have to wait till next issue's big review.

Christmas time is most definitely compilation time. Several companies are contending this year. Virgin's *Now Games 3* (just under £10 again) includes one of the all-time greats, *Sorcery*, as well as *Codename Mat II* and *Everyone's a Wally*.

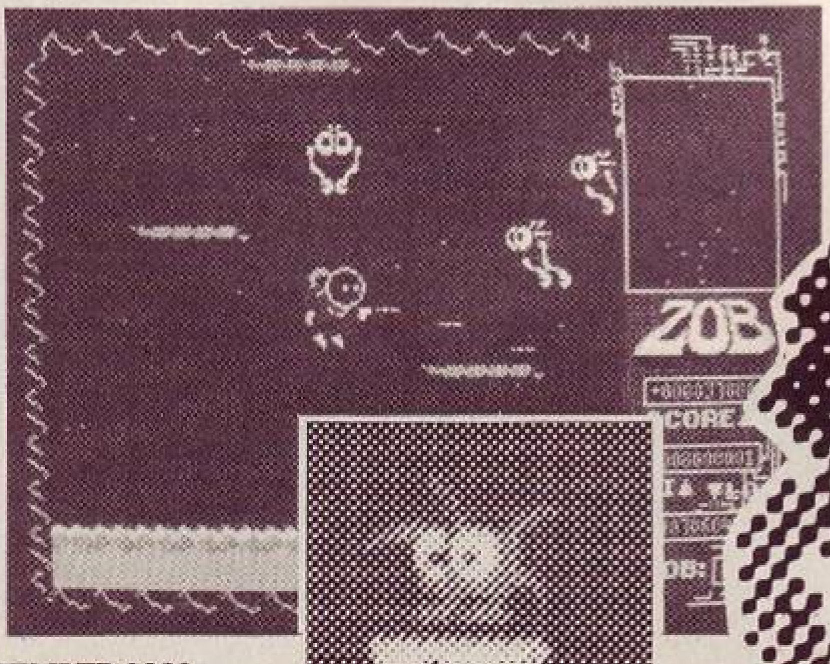
Keeping up the tradition is Beau-Jolly with *10 Computer Hits 3*. On this mighty cassette pack, you can find *Herbert's Dummy Run, On the Run* and *Cauldron* – something for everyone.





It just wouldn't be Christmas without *They Sold a Million 3* (£9.95 cassette, £14.95 disk). This year's contents include *Fighter Pilot, Rambo, Kung Fu Master* and *Ghostbuster*. Now that can't be bad.

Mastertronic, not wishing to left in the cold, is launching a series of games. *Project Amoeba*, judging from the screenshot we have, looks very promising. Have you heard that King Zub has had one of his crown jewels stolen? Awful tradgedy. That's why Private Zub from 'the glorious army of Zub1' is sent out to retrieve them. Confused? So are we, but that unfortunately is all there is go on at the moment.



Sepulcri (odd word) is the title of the next offering from Ariolasoft. The closest thing my



The 5th 'Official' Amstrad Computer Show was a larger success than ever, with people bustling in all corners of the Novotel showroom suite in Hammersmith, London. It was hard work at times trying to get a close look at the many weird and wonderful products on offer.

The Amstrad stand was overflowing with enquires on the new PC. Several of the IBM clones were on display that first weekend of October, with impressive business software packages running – however, I did catch a glimpse of Microsoft's *Flight Simulator II* on one machine.

As usual the show was dominated by hardware add-ons, plug-ins, do-whats – you get the general idea. A lot of new business-software houses are creeping into the picture, what with the 8000 range and now the appearance of the PC. I noted that much of this software runs under CP/M Plus (version 3.1) and will therefore, possibly with some reconfiguring, work on 6128 machines.

An Amstrad show couldn't really be called an Amstrad show without the noisy Alligata stand. True to form the crocs from Sheffield were showing their latest and past greatest at full blast. Besides Interceptor, the only other games software people present were Design Design – I'm sure a few more big 'recreational'software houses at the show would be welcomed by the Amstrad-using public.

DK'Tronics had a very smartly attired bunch of people from Great Yamouth – all in black t-shirts sporting the company logo. Their stand, with matching black background, showed off all their previous products with a fine selection of the new – such as a gadget that turns your monitor into a television. (A colour monitor can receive colour pictures; green-screen users will get pictures in green-and-...um...green). All this for £70. It's not cheap, but then picture quality is fairly excellent. DK'Tronics' other products are aimed at PCW users. Among these were a clock card and a programmable joystick interface combined with a sound generator for the hitherto voiceless Joyce.

With all the rom-boards available, not to mention kits to make them yourself, you would think anyone trying to promote a new board has either cracked up or has produced something quite astounding. I think the latter is correct for Britannia Software. With some very clever address fiddling, this Cardiff firm has built a board that allows an amazing 14 roms to be inserted. Only owners of the 464 will appreciate the wonders of this board, as it was originally thought impossible to have more than seven roms plugged into these machines – it is a fairly simple matter on 664s or 6128s. Britannia's board, at £40, is not the cheapest around, but it has the most to offer.

Arnor will have *Model Universe* ready very shortly. It is a three-dimensional drawing system that can rotate 360 degrees, zoom in or out, and use any of 27 colours. It is compatible with the AMX mouse. Included in the package is *Gatecrasher*, a strategy game.

Arnor, from Croydon, besides demonstrating its rom-based wordprocessor *Protext* at the show, had another rom up its sleeve: *BCPL* is coming very soon. *BCPL* is the language that formed the basis for *C*. It is block-structured into procedures – similar to Pascal. It generally gives good machine access: the stack, for example, is easily manipulated.

The Electric Studio of Letchworth, Herts, had various new products, mostly aimed at the

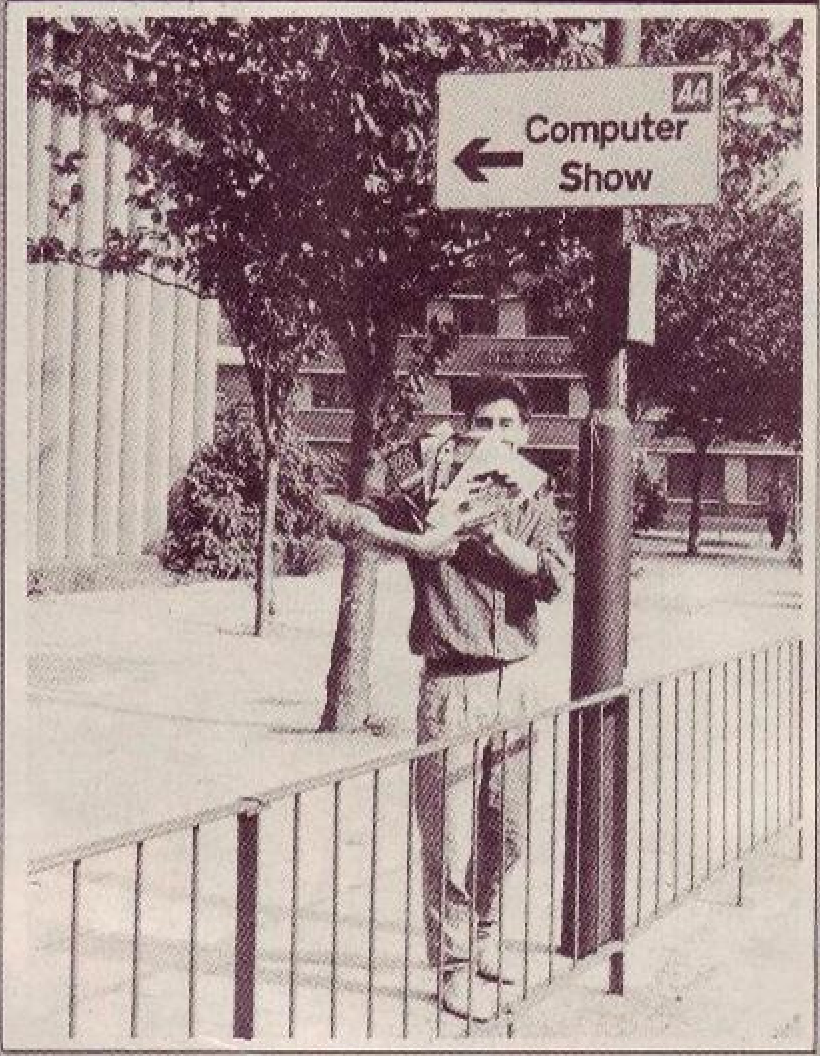
PCWs. There was a lightpen, mouse and video digitizer. The video digitizer comes in two models, one for the PCW and the other for the 6128. The 6128 version uses the extra memory, and consequently can display up to 12 frames a second (the screen size is understandably half normal size). This kind of technology will set you back £100.

Rombo, from Livingston in Scotland, was also demonstrating a video digitizer. We took one back to Somerset with us to do the cover of this issue. It's reviewed on pages 24 and 25 – we liked it.

Thinking of getting a second drive? Silicon Systems of Manchester offers a choice of two. One of them is the £90 Amdrive. This unit is ideal for 664 and 6128 owners as it's designed to fit neatly on top of the built-in drive. The second of these drives is the Mega Drive, at £229. As the name suggests, it has a million bytes of disk capacity. It uses 5.25-inch disks and can format 80 tracks, double-sided.

Remember the revolutionary expansion ram that the German firm Vortex brought out about a year ago? Well they've certainly been *fleissig* in the Black Forest, constantly striving to produce better, more powerful hardware devices for your Amstrad. They market in the UK through Viglen of Hanwell, London. The list of add-ons is so long and impressive that I can give only a quick description now of some of the products and promise a fuller look in a later issue.

Hardware showdown



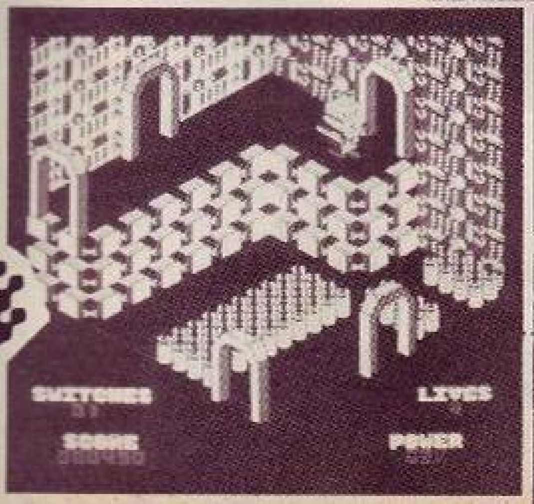
1987 signs point to the Royal Amstrad Action computer show.

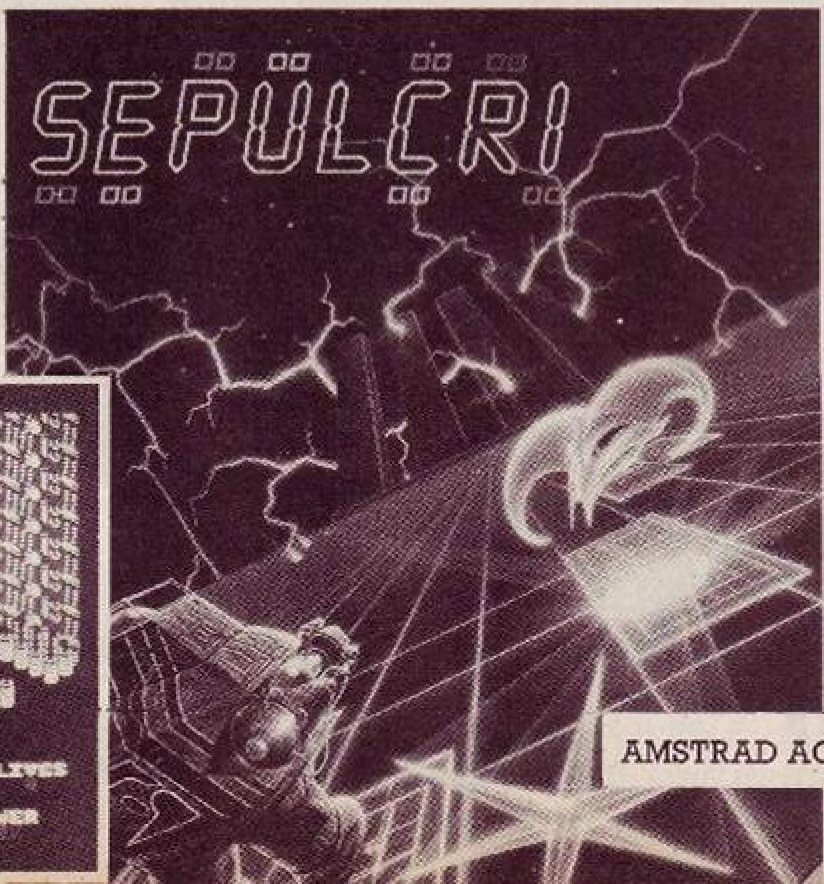
To whet your appetite, the new items from Neuenstadt include both 5.25- and 3.5-inch disk drives. (It was thought that 3.5-inch disks were impossible on the CPC machines – again Vortex has proved the textbooks wrong.) These can be either single or dual drives, giving 708k and 1.4M formatted capacity. A 20-megabyte hard disk is also on the shelves.

Users of the 6128 must have been envious for a while: 512k available for both the 464 and 664 while they were left with 128k. Sulk no longer; there is a special ram-expansion board just for you. But there's a price: £139. Vortex products may be exceptional in performance, but they also have exclusive prices!

It was certainly a jam-packed show, with many new exhibitors – I tried to get round to all but time was not on my side. Judging by the support and enthusiasm shown by everyone, the Amstrad machines have a long way to go.

spellchecker suggests is a burial ground or grave – spelt 'sepulchre'. Sounds enticing, does it not? I'm sure you'll forgive them the error of their ways – after all it is an American company. Ariolasoft comes up with some very exciting stuff in the next few months, including *The Centurians* and *The Challenge of the Gobots* (Gobots go botty – yeah!)





Another very exciting graphical arcade adventure will shortly hit the streets: *Firelord* from Hewson. There are 500 beautiful locations, set in the medieval land of 'Torot'. You take the role of Sir Galaheart, who must rid the land of all evil. (Now where have I heard that before?) It looks good, certainly not something you should pass by.



The Edge (nothing to do with U2), is all set to release the follow-up to *Fairlight* – with the original title *Fairlight II*. This begins where the prequel (?) left off. It's all outdoor scenery in enchanted forests, searching for the Book of Light. *Palitron* should be on the stalls soon. Programmed by one of the GOF, it's bound to be fantastic.

As you can see by that impressive list, there can be no cause for tears this Christmas. The games market for the Amstrad seems to be at an all-time high, and the standard of programs is getting higher and higher.

Are you a champion?

The time to prove your blasting prowess is nearing. Mikro-Gen, the organizer of the National Computer Games Championship, holds the final on the Guy Fawkes Day, 5 November, at the Savoy Hotel in London.

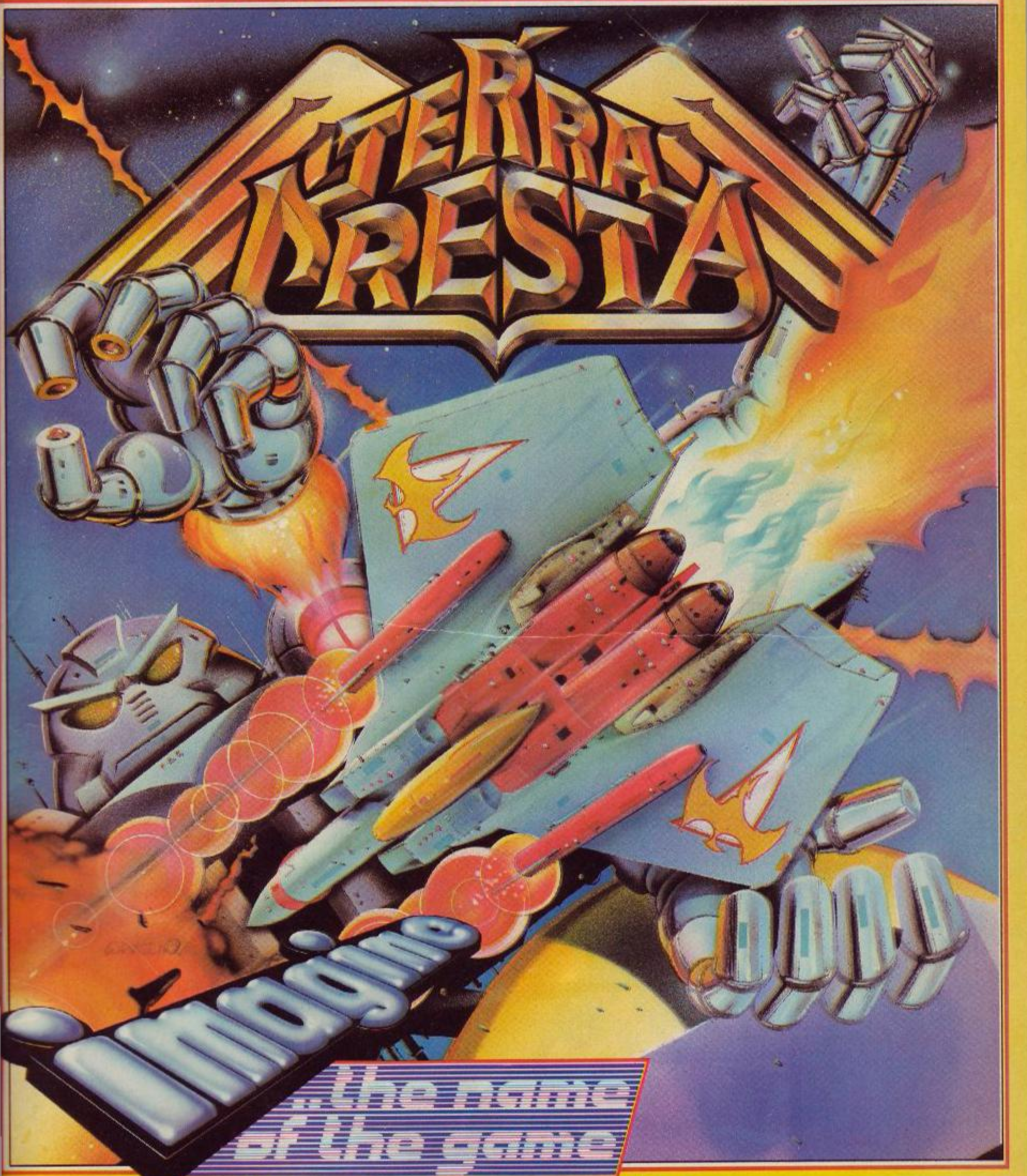
There will be a new game at the final, which means no one will have an unfair advantage. The number-one champion will receive a copy of all the Mikro-Gen games, an impressive trophy, a healthy £200 in the bank and national fame.

Can you resist the challenge? Get your old shoot-em-ups from under the bed and start blasting. Who knows, you may be the next hero.



SUGARMAN
By S. SARKAR
YIKE! WHO'S THAT, PLOUGHING STRAIGHT THROUGH, WITH NO CONCERN FOR OTHERS?
GUESS.
THUD!
QUEUE HERE FOR PCW SHOW
SUGAR
SCREECH
OUTSIDE THE OLYMPIA...
THUMP!
HERE IT IS!
LOOK, EVERYBODY!
ONE OF MY IBM PC CLONES!
AN' THE OTHER SEVEN ARE IN THE BOOT!
YAWN
SIGH
JUS' CHECK OUT THE SPECS!
YAWN
IT CAN RUN GEM IN 512K, SEE...?!
TWIN DISC DRIVES WITH 20Mb HARD DISCS!..
...UNDER D.R.'S DOS PLUS!
AND (WAIT FOR IT) A BUILT-IN...
TWIT!
YOU'VE WAITED TOO LONG!
ULP! BUSINESS-MAN!
NOW YOUR IMITATORS WILL GAIN A LARGE SHARE OF THE MARKET!
NYUK NYUK!
WHAT?!
IMITATORS??!
NAK!
Z..ZEE BOR YOURZELB... IDZIDE!
INSIDE...
SO WHERE ARE THEY?!
PAH! HOW MUCH CAN THEY COPY FROM ME, ANYWAY?
I'M...
UNIQUE...?
CHEAP IBM PC CLONES...!
GET YER LUVVERLY PC CLONES 'ERE...
CHEAPER THAN DIXON'S...
300 QUID TO YOU, JOHN...!
ONE DAY ONLY...!
GNARRGH!!
COPY THIS, THEN, PENCIL-NECKS!
RRIPPP!
TH..THAT'S A PRETTY GOOD APPROXIMATION...
YES, MY CLONEDROIDS!
KILL HIM TIL HE IS DEAD!
GET HIM, BROTHERS!
HE HAS ENTERED THE TRAP...
JUST AS OUR MASTER PLANNED!
RRIP!
RRIP!
RRIP!
MAIM HIM!
POW
WAK
AAARG!
KILL HIM!
STEP ON HIS TOES!
HYARHARHARHYUK!
IS THIS THE END OF SUGARMAN?!
HAH! YOU SHOULD BE SO LUCKY.

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WE NEED YOU !

SERIOUS SOFTWARE

Serious Software is now devoted totally to the CPC range, and we need your help!

With our new magazine *8000 Plus* being devoted totally to owners of the PCW 8256 and 8512, we on *AA* can devote all our pages to the CPC range: the 464, 664 and 6128. This means that changes are needed to Serious Software.

Although the PCW became the star of Serious Software, this does not mean that *Amstrad Action* is purely a games mag now. Serious Software still covers what business packages come out for the CPC models, but can devote more space to other aspects of home computing such as programming, type-ins, hints and tips, comms, graphics and music.

We would like your help with Serious Software: after all it's your mag. Send us your **Type-ins**. We are looking for quality listings that show elegant use of Basic or even machine-code. We will print them if they are worth typing in. Use the form on page 96 and remember, we pay for what we print.

Having problems with Basic? Can't persuade your printer to print? Worried about WordStar? Then write to **Problem Attic, Amstrad Action** at the Old Barn. We will print what problems we can, and if we can't answer them ourselves then maybe one of our multitude of readers can – and if they can't they might like to read the reply. But please don't ask us for solutions to games. If we printed those it might spoil the game for others, and there might not be room in *AA* for anything else!

Send us your hints and tips. If you've found any neat tricks to use in Basic, WordStar, Graphic Adventure Creator, Quill, dBaseII, or machine-code – or just want to show off – then send your tips to **Hot Tips, Amstrad Action,** at the Old Barn.

And if you are using your CPC to control your train set, run your business, play in a rock'n'roll band, or anything else that you might like to tell us about, the address is **A Day in the Life, Amstrad Action**, at the same address. The series kicks off with a look at how we produce *Amstrad Action* on Arnolds, but we would rather hear from you. Tell us what you are up to in anything from five to 500 words, and we will let the cat out of the bag. Please include your phone number too, so that we can contact you should we need more details.

CPC owners, this mag's totally for you!

OUR ADDRESS

Address your correspondence to **Type-ins, Problem Attic, Hot Tips** or **A Day in the Life** at:

Amstrad Action, Future Publishing Limited, Brunel Precinct, Somerton, Somerset, TA11 5AH

SERIOUS SOFTWARE TOP TEN

The chart created by AA readers

This month	Last month	% of votes	Title	Software house
1.	1	27.4%	GRAPHIC ADVENTURE CREATOR	Incentive
2.	7	10.4%	EASI AMSWORD	Amsoft
3.	8	6.8%	MINI OFFICE 11	Database
4.	—	4.2%	DISCOVERY	Siren
5.	3	4.0%	LASER BASIC	Ocean
6.	2	3.8%	AMX MOUSE	AMS
7.	4	3.5%	TASWORD	Tasword
8.	6	3.0%	MINI OFFICE	Database
9.	9	1.5%	THE QUILL	Gilsoft
10.	10	1.0%	ELECTRIC STUDIO LIGHTPEN	Electric Studio

And *Graphic Advenrure Creator* is stil at number one, with over quarter of you out there reckoning it to be the best thing since sliced bread. What is happening to all these adventures then? Tell us, please, what you are creating on *GAC* and we will let everyone else know.

I'm not going to say anything else about *Easi Amsword*, there doesn't seem to be a lot of point. But *Discovery* has certainly dashed in there, in the number four position. If you want your vote included in these charts, use the form on page 96.

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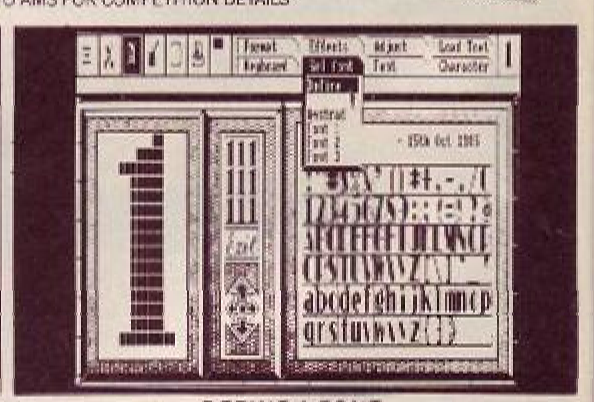
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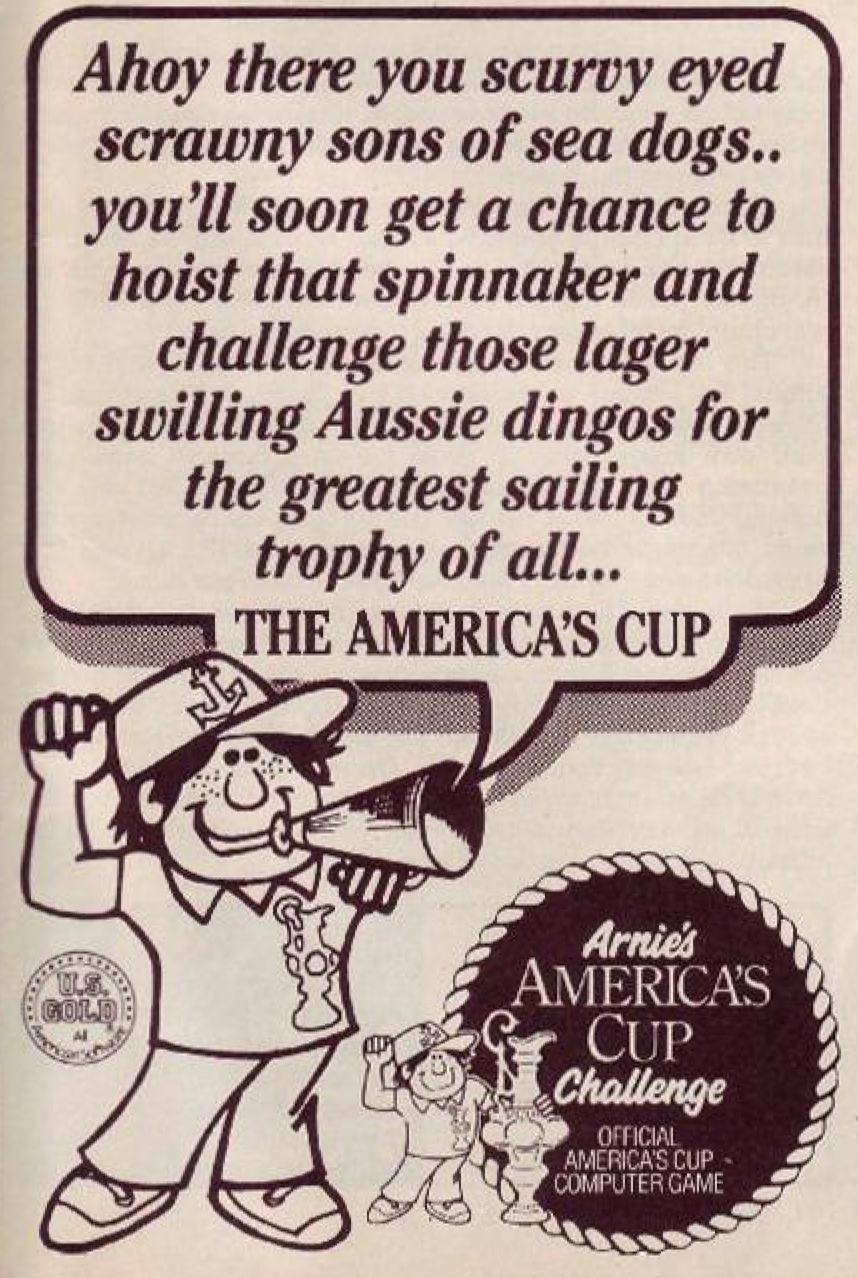
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SPEECH! Superior Software, £9.95 cass, £14.95 disk

Speech with no hardware requirements? There must be a catch somewhere.

Not one but several, as I soon discovered!

Being rather impatient when some new software lands on my desk, I tend to shove the disk (in this case) into the drive and commence loading without further ado. Well, you can imagine my surprise when 10 frustrating minutes passed and speech had still to reach my ears! Okay, time to sit down and read the instructions. Before long, I came across those fatal words: 'For the Amstrad CPC 664 or 6128' – aargh!

Why do software houses insist on alienating part of the Amstrad computing fraternity? This is a definite thumbs-down in my books. The reason for this incompatibility is sheer laziness on the part of Superior's Mr Paterson. A brief explanation is in order:

Locomotive Basic version 1.0 as seen on all 464 machines has certain differences from version 1.1 (on 664s and 6128s).



With version 1.1, strings can be used directly in CALL statements and resident system extensions (RSXs); these are commands preceded by the bar ('|'). Version 1.0 does not allow strings to be passed in this manner, but requires a two-stage process. For example, in version 1.0 you would type:

```
10 A$="Hello, readers!"
20 |SAY, @A$
```

compared to just this in 1.1:

```
10 |SAY, "Hello, readers!"
```

Although version 1.0 uses string variables in a slightly more cumbersome way, there is absolutely no justification for making *Speech!* (disk version) incompatible with version-1.0 machines.

Tape owners can be thankful the program will run on all CPC machines. The cassette has full instructions for transferring to disk.

The instructions accompanying the software are very concise. I do recommend that you read through them thoroughly, as it will save time having to constantly refer back.

There is a suite of six programs on the disk or tape, each having its own part to play in allowing the user full control over software speech.

Starting with the first of the programs, filename SPEECH, you soon discover six new commands available for you to manipulate. All are issued with the RSX bar prefix: |SAY, |SPEAK, |PITCH, |CENTRE, |LEFT and |RIGHT.

|SAY will cause English words following in quotes to be converted into phonemes or what Superior Software calls 'speech particles'. In other words, it will literally say (or attempt to) whatever is within the quotation-marks.

Adding a question-mark at the end of your sentence, within the quotes, will raise the pitch of the last word. A full-stop has the opposite effect – it lowers the pitch. A comma acts as a pause.

|SPEAK is more flexible than |SAY as it allows the pitch of the vowels to be varied. This is implemented by placing a number between 1 and 9 after the vowel. Using this trick in conjunction with commas, full-stops and question-marks gives you excellent control over stress and intonation.

To change the overall pitch of the sound, there is a |PITCH command. The parameter following it ranges from 1 to 20 – 1 chooses the lowest pitch, 20 the highest.

The final three commands are for setting the channel through which the sound is to be played: |CENTRE, |LEFT and |RIGHT.

You may feel that these commands satisfy your desire to hear Arnold speak. However, there are several other interesting aspects to *Speech!* – the other programs on the disk or tape.

All of these programs except NOTES must first have SPEECH loaded into memory, otherwise 'Unknown command' will appear regularly on the screen.

DEMO gives the user a general idea of the program's capabilities. It may be wise to switch off at this point; however for those still plugged in, the demonstration shows how each command works and the effects of changing certain parameters.

Next on the list is SPELL. This is quite an amusing and at the same time educational game. The program is a simple spelling test. The computer speaks the word to be spelt and prints an example sentence on the screen (with a blank, of course) to put the word into context. There is an option to change level of difficulty, A to C.

EDIT is available for adding to the data dictionary. The dictionary allows English text to be translated into a phonetic form before it can be pronounced. The routine called Translator scans through its input-buffer and produces a list of phoneme codes in the output-buffer.

Among the other programs is SAYFILE, which allows text files to be spoken. If you save a letter written with *Tasword*, an assembly listing from Maxam or even a Basic program with the 'A' option (saved in Ascii form rather than tokenized), SAYFILE will churn out whatever garbage it manages to find!

The last of the six programs spews out a 27k text file to either the screen or printer. It's a detailed description of *Speech!*, how it works, how to incorporate the programs into your own masterpiece. It takes the user through basic programming right up to machine-code level – in fact there is nothing 'hidden', all is readily 'got at'! (I do not recommend the word-processor the author used for typing NOTES – it seems to have done away with the last character from every line.)

Well, with all the speech synthesizers currently available, I am in two minds as to recommending this piece of software. At £15 on disk and £10 on cassette, it's not exactly cheap: paying double that amount will get you a fairly decent hardware speech synthesizer, which will not only give 'superior' speech but also stereo sound output. On the plus side, Superior Software's *Speech!* gives you a wide range of control over the sounds actually output and gives you the opportunity to incorporate *Speech!* into your own programs.

GOOD NEWS	BAD NEWS
► Requires no hardware ► Well documented ► Good control over sound output ► Ability to use in your own programs	► Disk version not 464-compatible ► Somewhat amateurish in appearance ► Speech not always recognizable ► Too expensive

Is Keith Wilson of lowland Scotland one of those rising software stars? Two *AA* Rave games are his work on the Amstrad. Still at school, he's one of the programmers behind (and in front of!) *Vidi*, Rombo's video digitizer.

A day in the life:

Keith's partner Arnold



Just over five years ago I managed to scrape up enough money to purchase my very first computer, a ZX81. Little did I guess that now I would be writing number-one computer games like *Yie Ar Kung-Fu* and *Green Beret*.

If there had been lots of stunning games around for the ZX81 (as there are now for other computers) I don't think I would have ever got round to writing my own programs. But 5 years ago there wasn't much else to do on a home computer, so I systematically worked my way through the Basic manual (meaning I started somewhere in the middle and read the whole thing backwards) and began developing my very own games.

Most of them consisted of a horizontally moving boat/spacecraft/aeroplane firing depthcharges/rockets/bombs at a horizontally moving submarine/alien/bird and they were all very simple, but they involved a lot of techniques which are standard in most games.

Creating stuff in Basic is a good way to learn how to program. But after a while I began to get fed up with the lack of speed and decided to enter the mystic lands of assembly code.

These days everybody seems to have anti-assembly complexes. Machine-code itself isn't really that complicated, the knack lies in deciding *exactly* what you're trying to do and how you're going to go about it. Anyway, after a while I found that I didn't seem to be getting anywhere with assembly. I packed it in, thinking that I had still a lot to learn. As it turned out, I knew most of it already and realized that machine-coding wasn't so bad after all!

The next great step in computing history was the ZX Spectrum – 'the world's best personal computer for under £500' the ads said. I eventually bought one and reapplied myself to machine-code. I also began to get ideas about making some money out of my hobby.

I decided to write an adventure using *The Quill*. Entitled *The Lost Orb*, it involved a crystal orb (surprisingly enough) which you had to find. Once the game was written, I decided to have a go at selling it. Eventually I sold quite a few. The price was low, but it made me some money and I was reasonably happy.

I began trying out all kinds of ideas in machine-code and I had plans for developing arcade games and other adventures. But then there were rumours about a new colour computer with an amazing specification, and I began to wonder if it would flood the market. The Arnold turned out to be all it was promised (and on time – unlike the ZX81 or Spectrum!) and yet again I changed computers.

Things really started happening when I met a guy called George Wright. We had similar ideas about writing software. We got together and began using a Commodore 64 with *White Lightning*, which was fast and much more fun than assembly. Working together turned out to be very successful and we began developing a game, which for various reasons never quite was. Incidentally, one of my great programming secrets is to drink lots and lots of tea which was (and still is) regularly supplied by George's wife, Linda.

> If you are using your CPC to control your train set, run your business (the Big Bang? the army?), play in a rock'n'roll band or anything else you might like to tell us about, the address is **A Day in the Life**, ***Amstrad Action*****, The Old Barn, Somerton, Somerset, TA11 5AH.**

It was around this time that I became seriously involved in Amstrad programming. Marcus Sharp (of Rombo Productions) was desperately looking for an Amstrad programmer to help him finish off a game conversion. The game was later abandoned, but I soon found myself working again, this time for Imagine Software.

My task was to convert the combat game *Yie Ar Kung-Fu* from the original arcade version by Konami onto the humble Arnold. I reckoned that I could manage it and with the help of a colleague, I did. *Yie Ar* became a very famous game and it opened up a whole new avenue of opportunities for me. Imagine was keen for me to stay. The firm managed to persuade me to do another arcade conversion, *Green Beret*.

I was getting a bit stuck for hours in the day by this time and I was very surprised (and pleased) when George offered to do the graphics for *Beret*. You can judge the results for yourself. From start to finish, the tape version of *Green Beret* took about three months to write. The graphics arrangement worked splendidly.

We often brought the two computers together to work on – it was great. I wrote code and George designed graphics. We argued, drank some more tea and fixed the problems. I then took the graphics and slotted them into the program while George worked on more graphics. It was hectic, but we often got more done on those weekends than we sometimes did in entire weeks.

One advantage of writing your own game is that if an idea doesn't work, you can just scrap it. You can't do that on a conversion; you have to work round it in some way.

Take *Green Beret*'s scrolling for example. The arcade machine has continuous scrolling but it also has a 68000 processor with plenty of memory and hardware. The CPCs just can't handle moving that amount of screen by software alone. And if you used a hardware scroll, the score information at the top and the weapons at the bottom have to be software-scrolled back to their correct position – not to mention the way the hardware scroll messes up the screen addressing! Hence, we had to use the 'burst' scrolling technique, which looked very jerky to me at the time but I just had to accept it. At least it gives you a bit of a rest from the hectic gameplay!

I am now working on an original game called *Moonshadow* with George. It is a large multi-screen game with a combination of fantasy and space elements, to be released on the Ocean label for the Amstrad, Commodore and Spectrum. I won't give too much away just now – you'll just have to wait until it's released next year.

George and I recently set up a company called Vega Graphics to handle *Moonshadow* and anything else which comes our way. We are also looking for a local Spectrum programmer of professional quality – anyone in the Lothian area who is interested please get in touch: (0506) 41 2221.

The future? Well, I'm working on digitizer software for Rombo's *Vidi*, and I've got plans for some serious software – assemblers, art packages etc – as well as a few more games. I also hope that Vega Graphics could develop into a form which would make it possible for us to market some of our own products, an area which we feel is better handled at the moment by the experts such as Ocean or Imagine. But who knows ... ?

I have found that I enjoy computer work. When I finish my education (I'm presently doing O-levels at Deans Community High School) I think that Vega would be an ideal full-time occupation.

Oh, I almost forgot to mention, I am 1111 years old – in binary, of course.

VIDI



Video digitizer comes, conquers our reviewer

The Vidi video digitizer
Rombo Productions, (0506) 39406, all CPCs, £89.95

Could this be the add-on of the century? Judge for yourself!

Vidi, as it's affectionately termed, is a video digitizer. In layman's terms, it's a black box that will 'grab' an image seen through a television camera or even a picture from your video recorder and store it as numbers in your Amstrad's memory. From there you can reproduce it on your monitor.

The people to thank for this ingenuity are Rombo Productions of Livingston, Scotland. The same small company – Colin Faulkner, Marcus Sharp and Keith Wilson – about 18 months ago brought out the highly successful romboard called Rombo – in my opinion the best one available.

Vidi is very similar in appearance to the Rombo. It comes in a neat black box with a length of ribbon cable allowing for easy connection to any of the CPC range. There are two through-connectors: one is at the end of the ribbon cable, and the other is on the circuit board inside the Vidi. This lets you use other peripheral devices that don't have through-connectors (and we all know the guilty party concerned).

More importantly, what does it do and how?

Vidi contains its own CRT (cathode-ray tube) controller. Arnold contains an identical one. Among the Vidi's circuitry are two banks of 8k ram (random-access memory), giving it 16k of video ram. This enables Vidi to obtain a single frame of animation from either a video tape or video camera. On completion of this grab, the Vidi ram is read into the computer's own screen ram.

Operation time for this is approximately 300 milliseconds. This gives a sequence of three pictures a second, which is more than adequate for most applications.

Software to enable the grabbing or digitizing of video pictures comes in various formats: rom, disk or cassette. The software is supplied as RSXs (resident system extensions) or rom (read-only memory) external commands, which allows users to customise their Vidi setup.

Right, let's connect up!

The edge-connector at the end of the Vidi ribbon cable is attached to the Amstrad's expansion port. Take care as it is not impossible to insert it upside-down. If you possess a romboard, plug the Vidi rom into a clear socket and switch on. Alternatively, load the software into memory – you should be ready to roll!

A cable included with the Vidi frame grabber is fitted with RCA (phono) and BNC (video) connectors. The phono end plugs into a socket on Vidi clearly marked 'video in'. Likewise the video plug goes to the 'video out' socket on your video recorder or video camera.

In case of difficulty, this next paragraph may be of some help. If, for example, you have a problem with the connections (in other words, if they don't fit), check that the Video Out is actually composite video and not RGB or modulated RF. RGB signals can be converted to composite with a suitable patch lead – this is where your dealer comes in handy! With RF signals, I'm afraid you are stuck, as Vidi cannot cope with these. Several makes of video recorder are fitted with phono sockets rather than BNC for Video Out – no problem here, for the correct cables are readily available from hi-fi shops. (Consider yourself lucky with a phono plug rather than BNC; the latter tend to lose their bits and cost a lot.)



Hopefully you are by now correctly set up and ready t play with your new toy. Let's look at the software.

You should find several new commands at your disposa These are accessed via external commands, which are prefixe by the | symbol (this is attainable by pressing Shift and @ There are a host of useful commands, the most comprehensiv being |VIDEO.

Typing this command should have you staring at a mode screen from your video camera or recorder. It's being contin ally updated, approximately three times a second. The smoo action on an ordinary television screen results from 50 scans second, so the effect of Vidi with |VIDEO is rather like a disc under strobelights.

At the bottom of the screen is a status line showing vario parameter settings:

ConØ7 BriØ7 ↑Ø64 Mode 1 InkØØ-ØØ Sav Prt

One of these will be highlighted with a cursor. The cursor easily moved using a joystick or the arrow (cursor) keys.

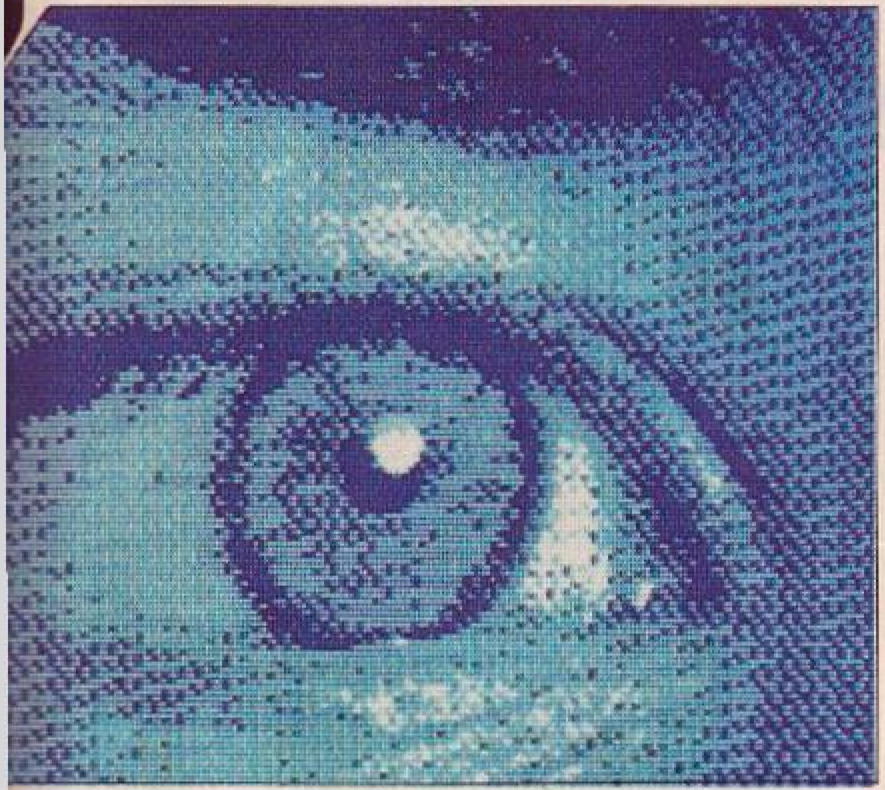
'Con' is the first option. Con varies the contrast through

range from 0 to 15. Zero causes the greatest difference between light and dark signals. To alter values for Con and its associates, move cursor keys or joystick up or down.

'Bri' stands for Brightness. A value of zero displays much of the picture in dark, while 15 has the opposite effect.

Hardware analogue controls supplement Con and Bri: there are tiny variable resistors on the circuit board, which you adjust with a small screwdriver. However you should not need to. These controls do not actually modify the video signal, but rather the sampling width and sampling level respectively.

Televison and video use 'interlaced frames' to produce an image on the screen. With this system 625 lines are displayed; the pictures are actually produced by successive scans of 312 and 313 lines, or 'odd' and 'even' frames. On the Amstrad CPCs,



only 200 lines may be displayed. This problem is overcome by 'windowing' onto an area of the image produced by the video camera or recorder. This window is set by the vertical position indicator, 'Vpos'. The three digits following are the number of lines offset at the top of the picture.

Moving along, we enounter 'Mode'. The modes available are 0, 1 and 2. Selecting mode 0 appears to have no effect – in fact it will display as mode 1 until either a 'Sav' or 'Prt' command is issued. The reason for this is that Vidi is designed to grab frames in modes 1 or 2. Thus to obtain a mode 0 image, several screens in succession must be integrated to synthesize the picture. This is done by reading 16 screens in mode 2. Each time a screen is read, the brightness control is increased. By taking note of the brightness setting, Vidi can switch on a group of pixels, hence assigning a mode 0 ink to it.

One drawback of using this method is that the required image must be perfectly still. Otherwise a blurred picture will result. Vidi was designed to work in modes 1 and 2; the mode 0 routine was included because, given the right conditions, excellent printouts can be produced. This would be easy with videotaped images.

The 'Ink' command will do the obvious: alter the colour in any ink pot. If the ink number is moved up or down, the relevant colour number will be displayed in the next box. Moving the cursor to the box displaying the colour number lets you alter its value – a range from 0 to 26. The ink numbers reflect the mode chosen, so in mode 2 only inks 0 and 1 can be used, and in mode 1 only inks 0, 1, 2 and 3 are changeable.

'Sav' saves the screen image to either disk or tape. It is possible to save screen images in rapid succession. The filename you select will have a number following it, incremented with each successive save.

The 'Prt' command will grab a screen in the current mode and dump it to a dot-matrix printer. Epson-compatible printers and the Amstrad DMP2000 are catered for. Mode 1 and 2 screens are printed normally across the page, whereas a mode 0 image is turned 90 degrees on the page.

Pressing Escape at any time will exit you from |VIDEO. All the parameters set while |VIDEO was in operation will remain intact – even upon re-entry.

The other bar-commands perform essentially the same function as features available from the |VIDEO menu.

|VGRAB, as its name implies, gets a single frame using the current settings. The screen mode is not reset, thus allowing the user to use this command repeatedly without screen blanking. One thing to beware, though, is that |VGRAB works on absolute addresses; therefore the screen should not be scrolled.

Here is a list of other bar-commands at your service. Follow them with a comma and the value you wish to set them to.

|CON,x	set contrast (x ranges from 0 to 15)
|BRI,x	set brightness (0 to 15)
|VPOS,x	set vertical position (0 to 127)
|VMODE,x	set grab mode (0, 1 or 2 only)
|VINK,x,y	set ink x to colour y
|VPRINT	print hard copy in current |VMODE

There is one other command, |VCONVERT. With it inks 2 and 3 swap colour. Its main purpose in life is for printer or graphic routines that expect shades to be in the order 0123. As a result of its hardware configuration Vidi picks up shades in the order 0132, with 0 the darkest and 3 the lightest. Some print-dump routines can not cope with this – thus the command |VCONVERT.

Enhancements are on the way for the Vidi software, Rombo programmers said at the Amstrad Show:

- true colour, which will work by taking a series of frames through red, green and blue filters
- mode 0 from mode 1, thus greatly speeding up synthesis time
- series grab, enabling 6128 owners to grab a series of frames in the extra bank of ram before saving – animation sequences may even be possible!

If that wasn't enough to whet your apetite, within the next few weeks the hard-working Rombo team has promised to make screens compatible with Rainbird's £20 *Art Studio* (last month's cover feature). This will unleash untold power to your disposal – imagine the fun you could have distorting facial images!

The most exciting is yet to come: using a smaller screen size, they hope to have Vidi producing 10 frames a second. This will give much smoother animation and will really push Arnold to his limits.

You may have gathered I am head-over-heels with Vidi. It opens up a completely new area for experimentation and enjoyment. It's a stunning new product.





GOOD NEWS	BAD NEWS
► Digitize up to three frames a second ► Colour, mode, contrast under full user control ► Excellent printer-dump routine included ► Well-written, easy-to-follow manual ► Only £90.	► You will need a video recorder or camera ► Can't receive television images (RF signals) ► Takes long time to generate mode 0 screen ► Will keep you away from work ► Costs £90.

TYPE-INS

A ton of type-ins this month! One is long and possibly loud; the rest are short and spectacular. We hope you like the section's new look. Keep them coming.

Ears for Arnold

SOUND DIGITIZER by Richard Monteiro

With this amazing listing Arnold can speak with your voice – or mimic Frankie Goes To Hollywood – or reproduce any sound a microphone can record on an ordinary cassette.

The program is a simple sound sampler. When you play the audio tape on the 464's datacorder or a tapedeck plugged into the 664 or 6128, the sounds are converted to the digitized form that Arnold can remember.

With a simple command you can reproduce it out of his speaker. Imagine what your computer could say at strategic points in your games. (Don't be too rude, now!)

A lot of hard work is in store for you with all this typing. Type in the listing carefully. It's best to get a friend to dictate while you type – goes more quickly saves losing your place by looking back and forth from paper to screen.

The data statements actually consist of machine-code produced using the Maxam assembler. You won't need an assembler because the Basic program simply pokes the numbers to memory, starting at location &9000.

The listing contains an elementary checksum routine: all the numbers have to add up to 57871 or you have made a typing mistake. It may help to realize the data is made up of hexadecimal numbers, so you shouldn't be typing anything other than the numbers 0 to 9 and A to F – always two digits, comma, two digits.

Save the program before you run it, or you might lose your work! Instructions for saving it are tagged onto the end of the listing as REM statements. You need not type these in, but it's not a bad idea to keep the directions in the program in case you can't find this printed page in a year's time.

When you run it, one of two things could happen. If you get the message 'Error in data,' it's back to the start and check all those data statements again. If all is correct you will see 'Data OK – well done' and the cursor returned for your control.

You will now have some new commands to play with, issued via Resident System Extensions (RSXs), commands preceded by the bar, '|', which shares a key with '@'. (Yes that's right, bar-commands: two pints of lager and a packet of crisps, please!)

|RSOUND has to have several commas and numbers following it – parameters – to instruct the program on the correct course of action. The computer needs to know location and length: where in memory to load the sound data and how much of it. These two parameters must be present, otherwise the noisy message 'Parameter error' will present itself. A third optional variable controls speed or rate of data entry into memory.

```
100 '
110 ' SOUND DIGITIZER
120 ' Copyright Amstrad Action Dec 1986
130 '
140 FOR t=&9000 TO &9207
150 READ a$:x=x+VAL("&"+a$)
160 POKE t,VAL("&"+a$):NEXT t
170 IF x<>57871 THEN 200
180 PRINT"DATA OK -- WELL DONE"
190 CALL &9000:END
200 PRINT"ERROR IN DATA":STOP
```

Before deploying this command, insert a cassette wit music, your voice or any other sound into the datacorder. A message will surface asking you to 'Press a key.' Do a requested and the sound data will load. The format of thi command and the other commands is shown below.

|PSOUND is similar to |RSOUND in that the first tw parameters must be present. That is where the similarity end as |PSOUND instructs the computer to output through th Amstrad's internal loudspeaker any data it may have picked u during the execution of |RSOUND. Again there is a thir possible parameter; this time it controls the loudness at whic that sound will be output.

|R and |P are identical to |RSOUND and |PSOUND. Thes are for all incredibly lazy people who hate long commands – am just too kind!

Due to the programming technique employed, it is no possible to speed up or slow down the rate at which the soun data is output – this is constant. You will get that type of effe only if, when recording into memory (using |RSOUND or |R you alter the third parameter from its default value of 13. Th number can range between 1 and 255. The larger the numbe the slower the sound data will be read into the compute consequently when playing back (using either |PSOUND o |P), the sound will seem to have been speeded up.

This may sound rather daunting. Don't worry if you hav not fully grasped the situation: trial-and-error is the be method of teaching yourself.

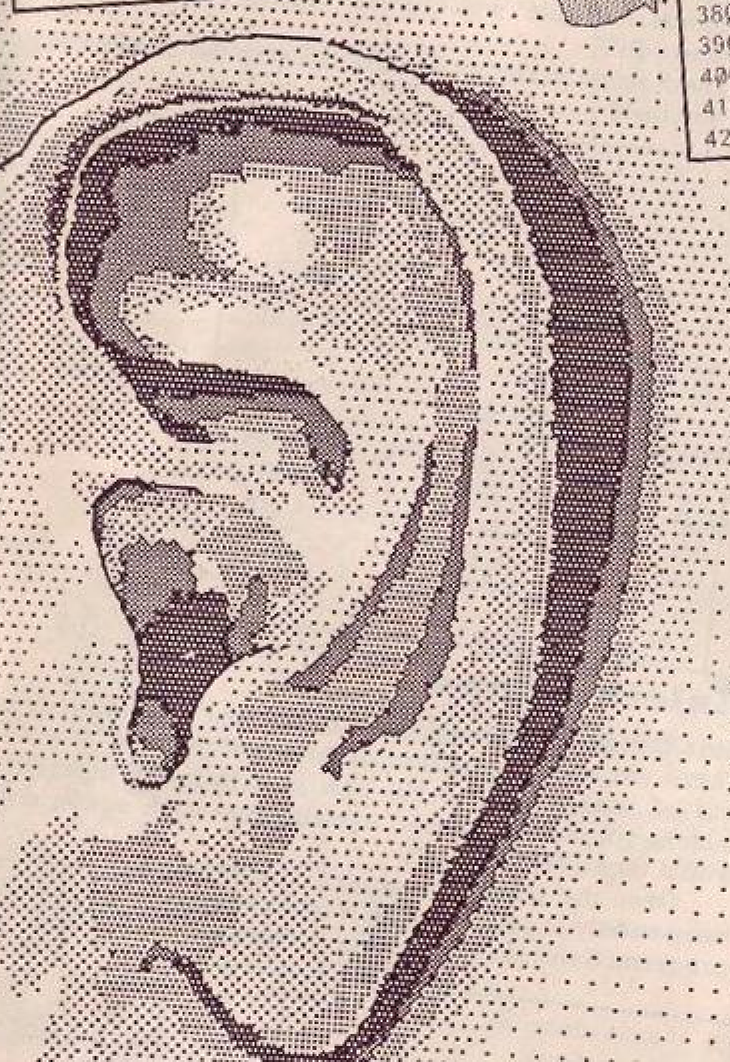
Now follows the promised layout of the commands:

|PSOUND, *location, length, rate of data entry*
|RSOUND, *location, length, loudness*

location can be between 0 and 65536 (&FFFF)
length can be between 0 and 65536 (&FFFF)
rate of data entry can be between 1 and 255 (&FF)
loudness can be between 1 and 15 (&F); 15 is the loudest

```
210 DATA 01,0A,90,21,1B,90,CD,D1,BC,C9
220 DATA 1F,90,C3,31,90,C3,31,90,C3,97
230 DATA 90,C3,97,90,C3,7D,91,00,00,00
240 DATA 00,D2,52,53,4F,55,4E,C4,50,53
250 DATA 4F,55,4E,C4,D0,52,50,CD,00,ED
260 DATA 73,84,91,FE,03,C2,4C,90,DD,7E
270 DATA 00,FE,00,CA,D7,90,32,0F,91,DD
280 DATA 23,DD,23,C3,56,90,FE,02,C2,D7
290 DATA 90,3E,0D,32,0F,91,DD,5E,00,DD
300 DATA 56,01,DD,6E,02,DD,66,03,E5,CD
310 DATA 6E,BC,21,C6,91,CD,DE,90,3E,42
```

```
320 DATA CD,1E,BB,C2,C7,90,3E,2F,CD,1E
330 DATA BB,C2,7F,90,C3,6C,90,21,9D,91
340 DATA CD,DE,90,D5,CD,A7,BC,D1,E1,CD
350 DATA E9,90,3E,07,CD,5A,BB,CD,71,BC
360 DATA C9,ED,73,84,91,FE,03,20,0E,DD
370 DATA 7E,00,E6,0F,32,51,91,DD,23,DD
380 DATA 23,18,0A,FE,02,C2,D7,90,3E,0F
390 DATA 32,51,91,DD,5E,00,DD,56,01,DD
400 DATA 6E,02,DD,66,03,CD,14,91,C9,3E
410 DATA 0A,CD,5A,BB,CD,5A,BB,CD,71,BC
420 DATA ED,7B,84,91,C9,21,86,91,CD,DE
```



```
430 DATA 90,C9,7E,FE,00,C8,CD,5A,BB,23
440 DATA C3,DE,90,F3,E5,DD,E1,06,08,AF
450 DATA CD,05,91,CD,0E,91,17,10,F7,DD
460 DATA 77,00,DD,23,1B,7A,B3,20,EA,FB
470 DATA C9,C5,06,F5,ED,60,CB,14,C1,C9
480 DATA 26,0D,25,20,FD,C9,E5,D5,CD,33
490 DATA 91,D1,E1,06,08,CB,06,C5,DC,4D
500 DATA 91,D4,57,91,C1,10,F4,23,1B,7A
510 DATA B3,20,EC,CD,A7,BC,C9,CD,A7,BC
520 DATA F3,3E,03,0E,00,CD,61,91,3E,07
```

```
530 DATA 0E,3D,CD,61,91,3E,02,0E,00,CD
540 DATA 61,91,C9,F5,3E,09,0E,0F,CD,61
550 DATA 91,F1,C9,F5,3E,09,0E,00,CD,61
560 DATA 91,F1,C9,F5,3E,C0,06,F6,ED,79
570 DATA 06,F4,F1,ED,79,06,F6,3E,80,ED
580 DATA 79,06,F4,ED,49,06,F6,AF,ED,79
590 DATA C9,21,F6,91,CD,DE,90,C9,00,00
600 DATA 07,0A,0D,50,41,52,41,4D,45,54
610 DATA 45,52,20,45,52,52,4F,52,07,0A
620 DATA 0A,0D,00,07,18,2A,2A,2A,2A,2A
```

```
630 DATA 2A,2A,2A,20,50,4C,45,41,53,45
640 DATA 20,57,41,49,54,20,52,45,43,4F
650 DATA 52,44,49,4E,47,20,2A,2A,2A,2A
660 DATA 2A,2A,2A,2A,18,0D,0A,0A,00,07
670 DATA 0D,0A,50,52,45,53,53,20,54,48
680 DATA 45,20,53,50,41,43,45,20,42,41
690 DATA 52,20,54,4F,20,53,54,41,52,54
700 DATA 20,52,45,43,4F,52,44,49,4E,47
710 DATA 0D,00,07,0D,0A,0A,A4,20,52,70
720 DATA 4D,20,31,39,38,36,0D,0A,0A,07
```

```
730 '
740 ' SAVE PROGRAM BEFORE RUNNING!
750 '
760 ' to save as a BASIC file type:
770 ' SAVE"DIGITIZE"
780 '
790 ' to save as a BINARY file type:
800 ' SAVE"DIGITIZE.BIN",B,&9000,&210
810 '
820 ' to reload BASIC file type:
830 ' RUN"DIGITIZE"
840 '
850 ' to reload BINARY file type:
860 ' MEMORY &8FFF:LOAD"DIGITIZE.BIN"
870 ' followed by CALL &9000
880 '
```

To summarize, follow these short steps:

1. Place the cassette with your voice, music or anything into tapedeck.
2. Type in direct mode: `|RSOUND,&3000,&5000` (Return)
3. Follow the prompts
4. When 'Ready' appears, type: `|RSOUND,&3000,&5000` (Return)
5. Wow!
6. Read the article again – try something more adventurous.

Further bright sound ideas

After typing in the first listing, and playing around with it for a while, you may become stuck for ideas. Following is a program that will allow you to record, play back, load and save any digitized sounds.

It is essential that you run the main digitizer program primarily. This loads all the machine-code into memory, which contains the routines to load in the sound data and output it again through the Amstrad's built-in speaker.

The Sampler program allows three separate sounds to be loaded from tape into memory and played back individually. The sample time for each is approximately four seconds – taking up about 5k of RAM. If feeling adventurous you could expand on this skeletal program, giving the possibility for more samples, variable-length samples and so on.

This program is intended to stimulate your own ideas toward formulating a program incorporating digitized speech. One such application could be password protection for

your program: If someone enters an incorrect code, a harsh voice (yours) comes booming through the speaker telling him to 'Get Lost!'

Or you could set up keys to say their name when pressed – might be useful for verifying input, or for teaching a toddler to recognize numbers.

The possibilities are endless.

```
10 ' Sound sampler
20 ' (c) Amstrad Action   Dec 86
30 '
40 ' main loop
50 OPENOUT"y":MEMORY &1FFF
60 MODE 2:INK 0,0:BORDER 0:INK 1,26
70 IF PEEK(&9000)<>1 THEN 100
80 GOSUB 140:GOSUB 210
90 END
100 ' error: no code found
110 PRINT"DIGITIZER CODE HAS NOT ";
120 PRINT"BEEN LOADED!";CHR$(7)
130 STOP
140 ' setup
150 PRINT"SOUND SAMPLER"
160 PRINT:PRINT"S -- to sample sound"
170 PRINT"P -- to play back sound"
180 PRINT"[ -- to save sampled sound"
190 PRINT"] -- to load sampled sound"
200 RETURN
210 ' test for key press
220 a$=INKEY$:IF a$="" THEN 220
230 a$=UPPER$(a$)
240 ON INSTR("SP[]",a$) GOSUB 280,390,490,580
250 LOCATE 1,10:PRINT SPACE$(200)
260 PRINT SPACE$(200)
270 LOCATE 1,1:PRINT CHR$(7):GOTO 220
280 ' sample sound
290 LOCATE 1,10:PRINT"INSERT ";
300 PRINT"CASSETTE INTO TAPEDECK"
310 PRINT"PRESS A KEY (1 TO 3) ";
320 PRINT"TO SAMPLE SOUND"
330 b$=INKEY$:IF b$="" THEN 330
340 ON INSTR("123",b$) GOTO 360,360,360
350 GOTO 330
360 loc=(VAL(b$)*&1000)+&1000
370 |R,loc,&1000
380 RETURN
390 ' play back sound
400 LOCATE 1,10
410 PRINT"PRESS A KEY (1 TO 3) ";
420 PRINT"TO PLAY BACK SOUND..."
430 c$=INKEY$:IF c$="" THEN 430
440 ON INSTR("123",c$) GOTO 460,460,460
450 GOTO 430
460 loc=(VAL(c$)*&1000)+&1000
470 |P,loc,&1000
480 RETURN 490 ' SAVE SAMPLE
500 LOCATE 1,10:PRINT"SAVE ";
510 PRINT"WHICH SAMPLE (1-3)..."
520 d$=INKEY$:IF d$="" THEN 520
530 ON INSTR("123",d$) GOTO 550,550,550
540 GOTO 520
550 loc=(VAL(c$)*&1000)+&1000
560 SAVE"sample"+d$,b,loc,&1000
570 RETURN
580 ' load sample
590 LOCATE 1,10:PRINT"LOAD ";
600 PRINT"WHICH SAMPLE (1-3)..."
610 e$=INKEY$:IF e$="" THEN 610
620 ON INSTR("123",e$) GOTO 640,640,640
630 GOTO 610
640 loc=(VAL(e$)*&1000)+&1000
650 LOAD"sample"+e$,loc
660 RETURN
```

Motor control

Here is a listing that will add two RSX commands, provin especially useful for users of the 664 or 6128. Depending on th tapedeck, some have to type |TAPE then CAT just to be able t rewind a tape – all a bit awkward.

Alex Aird of Birmingham has come up with a helpf soloution to this problem. Type in the listing, and if all has bee entered correctly, a message telling you that you have 'extr commands available' will appear. These extra commands ar |ON and |OFF.

Their action is simply to start and stop the cassette motor nice and neat!

```
1 ' Motor control
2 ' Alex Aird
3 ' Amstrad Action   Dec 86
4 '
10 MEMORY 40000
20 FOR a=42000 TO 42032:READ b$
30 b%=VAL("&"+b$):POKE a,b%:NEXT a
40 CALL 42000
50 PRINT"New commands |ON and ";
60 PRINT"|OFF now available"
70 ' SAVE "onoff.bin",b,42000,33
80 DATA 01,1D,A4,21,19,A4,C3,D1
90 DATA BC,00,00,00,00,25,A4,C3
100 DATA 2B,A4,C3,2E,A4,4F,CE,4F
110 DATA 46,C6,00,C3,6E,BC,C3,71
120 DATA BC
```

Kaleidoscope

Alex Gough of Hastings, Sussex, has sent a marvellous listing There are virtually endless variations of patterns. A great de can be user-controlled; the best idea is to try different para meters yourself. Trying to explain what each option could d would take a lifetime.

Once the pattern has been completed, the computer wi beep rudely at you. Pressing N takes you to the beginning of th program; S will save the screen picture to tape or disk.

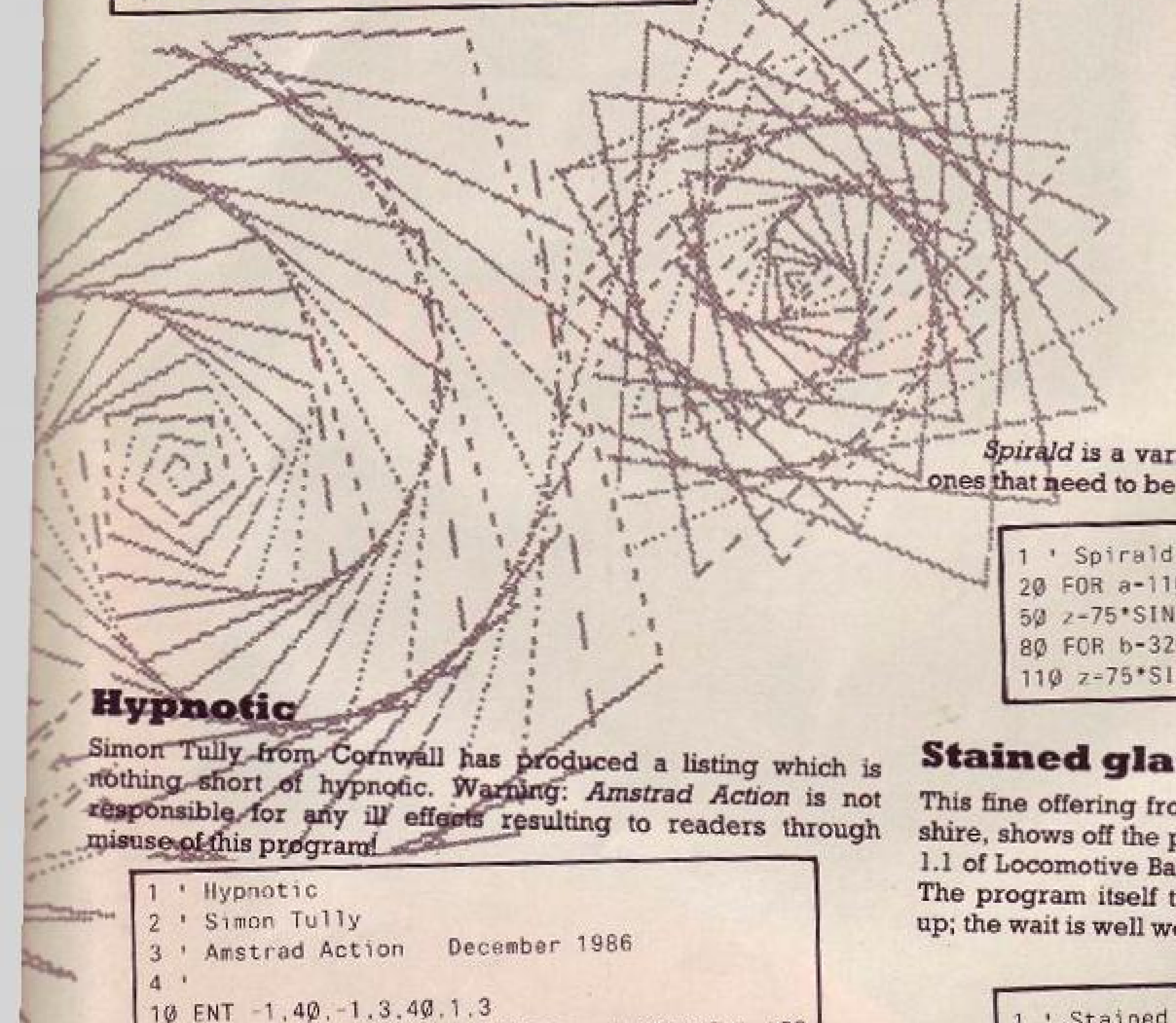
```
1 ' Kaleidoscope
2 ' Alex Gough
3 ' Amstrad Action   Dec 86
4 '
10 MODE 1:INK 14,0:INK 15,2
20 INPUT"GRAPHICS MODE(0 1 or 3): ";m
30 INPUT"OVERALL SIZE(5-30): ";f
40 INPUT"NO. OF REPETITIONS: ";e
50 INPUT"NO. OF SIZE INCREMENTS: ";g
60 INPUT"NO. OF LINES PER BLOCK: ";d
70 INPUT"LENGTH OF LINES: ";c
80 PRINT CHR$(23):CHR$(m)
90 MODE 0:ORIGIN 320,200
100 CLS:FOR z=1 TO e:FOR a=1 TO g
110 x=INT(RND*f)*a:y=INT(RND*f)*a
120 xx=INT(RND*f)*a:yy=INT(RND*f)*a
130 p=INT(RND*15)+1
140 FOR b=1 TO d
150 PLOT x+b*c,y+b*c,p
160 DRAW xx+b*c,yy+b*c
170 PLOT -x-b*c,y+b*c
180 DRAW -xx-b*c,yy+b*c
190 PLOT x+b*c,-y-b*c
200 DRAW xx+b*c,-yy-b*c
210 PLOT -x-b*c,-y-b*c
220 DRAW -xx-b*c,-yy-b*c
230 NEXT:NEXT:NEXT
240 SOUND 1,200,200,7
250 a$="":WHILE a$="":a$=INKEY$:WEND
260 IF LOWER$(a$)="s" THEN GOTO 290
270 IF LOWER$(a$)="n" THEN RUN
280 GOTO 100
290 SAVE"!PIC",b,&C000,&4000
300 LOCATE 8,12:PRINT"READY"
310 FOR p=1 TO 600:NEXT:RUN
```



Patterns

An interesting program from Mr P Tunstall of Kingsbury, Staffs: its small size does it no justice. By typing in various parameters, the computer rapidly draws complex designs on the screen.

```
1 ' Patterns
2 ' P P Tunstall
3 ' Amstrad Action   Dec 86
4 '
10 MODE 2:BORDER 0:INK 0,0:INK 1,13
20 PRINT "Enter Pattern Factor (0.5 ";
30 INPUT"to 4.5 for best patterns): ",n
40 CLS:ORIGIN 320,200,0,639,450,0
50 FOR x=0 TO 130 STEP n:y=2.5*x
60 INK 1,(x/12),(x/10)
70 DRAWR y*COS(x),y*SIN(x)
80 SOUND 3,(x/3.14159),0,5,15
90 NEXT x:GOTO 20
```



Spiralu

Mr B A Knight from Mortimer,Berkshire, has sent a fairly short routine which takes a very long time to execute – ample time to cook your lunch and eat it! Nevertheless, this is an interesting listing worthy to be typed in. It shows good use of the CPC's mathematical functions and what they are capable of.

```
1 ' Spiralu
2 ' B A Knight
3 ' Amstrad Action   December 1986
4 '
10 MODE 2:INK 0,0:INK 1,26:BORDER 0
20 FOR a=60 TO 580 STEP 10
30 y=200+125*COS(a/639*PI*4)
40 ORIGIN a,y
50 z=75*COS(a/639*PI*6)
60 GOSUB 160
70 NEXT a
80 FOR b=320 TO 639 STEP 10
90 y=200+125*COS(a/639*PI*4)
100 ORIGIN b,y
110 z=75*COS(a/639*PI*6)
120 NEXT b
130 PLOT a,y
140 PLOT b,y
150 GOTO 150
160 FOR n=1 TO 360
170 x=SIN(n)
180 y=COS(n)
190 PLOT z*x,z*y
200 NEXT n:RETURN
```

Spirald is a variant of *Spiralu*. The lines listed are the only ones that need to be altered.

```
1 ' Spirald
20 FOR a=110 TO 539 STEP 10
50 z=75*SIN(a/639*PI*6)
80 FOR b=320 TO 629 STEP 10
110 z=75*SIN(a/639*PI*6)
```

Hypnotic

Simon Tully from Cornwall has produced a listing which is nothing short of hypnotic. Warning: *Amstrad Action* is not responsible for any ill effects resulting to readers through misuse of this program!

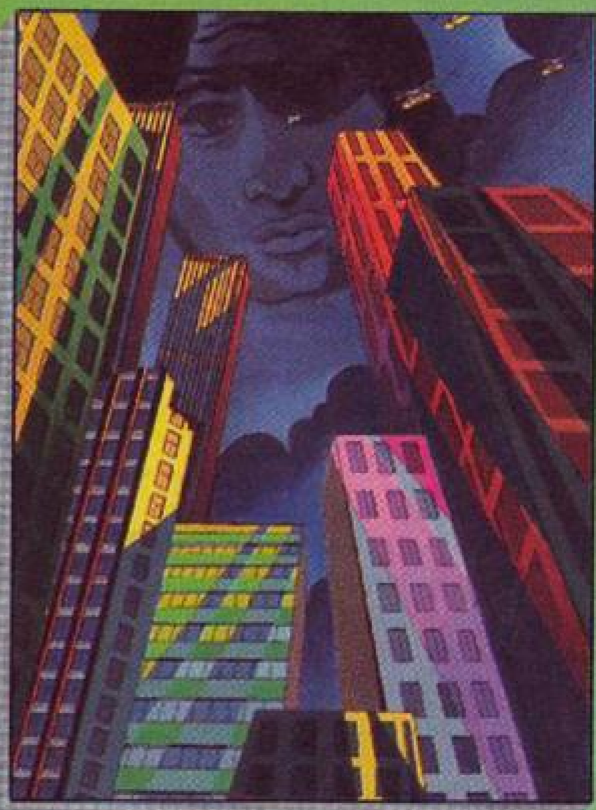
```
1 ' Hypnotic
2 ' Simon Tully
3 ' Amstrad Action   December 1986
4 '
10 ENT -1,40,-1,3,40,1,3
20 ENV 1,10,-1,100,10,1,100,10,-1,100,10,1,100
30 ON BREAK GOSUB 250
40 DEFINT a,b:MODE 0:ORIGIN 320,200
50 FOR a=a TO 15:INK a,26:NEXT
60 c=0:INK 0,0:BORDER 0
70 WINDOW #1,1,1,1,25
80 WINDOW #2,40,40,1,25
90 PRINT#1,"WATCH CLOSELY AND YOU"
100 PRINT#2,"WILL SOON BE IN MY GRASP"
110 FOR k=-4 TO 2 STEP 0.5:c=c+1
120 FOR f=0 TO 4*PI STEP PI/50
130 x=20*f*COS(f-k):y=20*f*SIN(f-k)
140 IF f=0 THEN MOVE x,y
150 DRAW x,y,c
160 NEXT f,k:FOR a=0 TO c:INK a,0:NEXT
170 CLS #1:CLS #2:ON SQ(1) GOSUB 230
180 WHILE 1:FOR a=c TO 1 STEP -1
190 IF a=c THEN INK 1,0 ELSE INK a+1,0
200 CALL &BD19:IF a=c THEN INK 1,0
210 INK a+1,0:INK a,26
220 FOR b=1 TO 35:NEXT b,a:WEND
230 SOUND 1,500,4000,15,1,1
240 ON SQ(1) GOSUB 230:RETURN
250 INK 1,26:PEN 1:MODE 1
```

Stained glass

This fine offering from Alastair Scott of Grangemouth, Stirlingshire, shows off the powerful Fill command available on verson 1.1 of Locomotive Basic (664 and 6128 owners only, I'm afraid). The program itself takes several minutes drawing everything up; the wait is well worth it, though!

```
1 ' Stained glass -- 664 AND 6128 ONLY
2 ' Alastair Scott
3 ' Amstrad Action   Dec 86
4 '
10 DEFINT a-z:DEG:RANDOMIZE TIME
20 MODE 0:BORDER 0:INK 0,0
30 ORIGIN 320,200
40 FOR a=0 TO 360 STEP 20
50 MOVE 0,0
60 FOR b=0 TO 360 STEP 20
70 DRAWR 35*SIN(a+b),35*COS(a+b),1
80 NEXT b,a
90 FOR a=0 TO 360 STEP 12
100 FOR b=0 TO 170 STEP 12
110 MOVE b*SIN(a),b*COS(a)
120 FILL INT(RND*14)+2
130 NEXT b,a
140 CLEAR INPUT:WHILE INKEY$<>CHR$(13)
150 INK INT(RND*14)+2,INT(RND*26)+1
160 WEND:MODE 1:CALL &BC02:END
```





KHAÂL

MANHATTAN 95

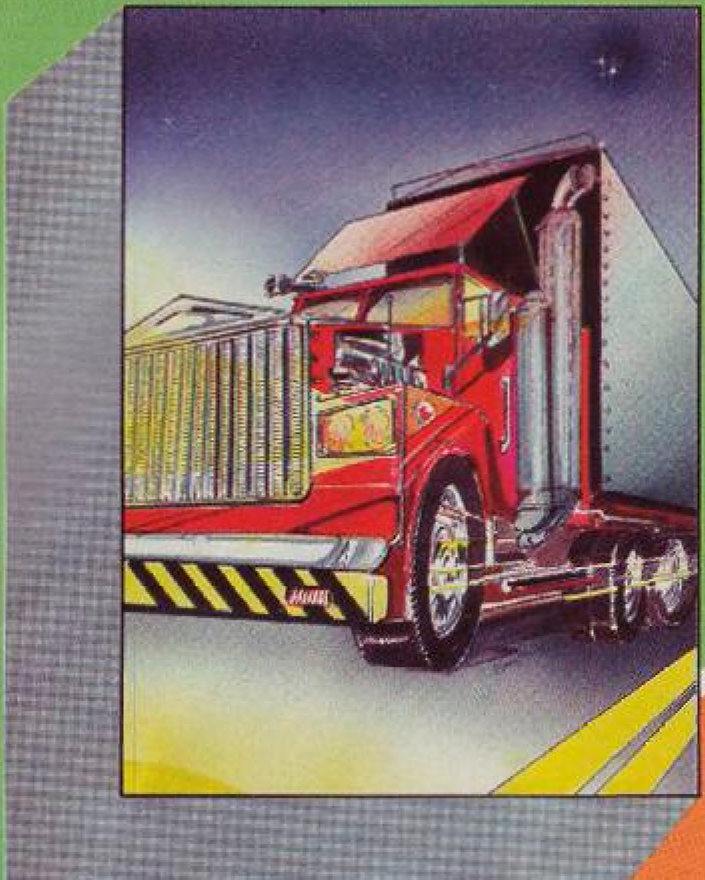


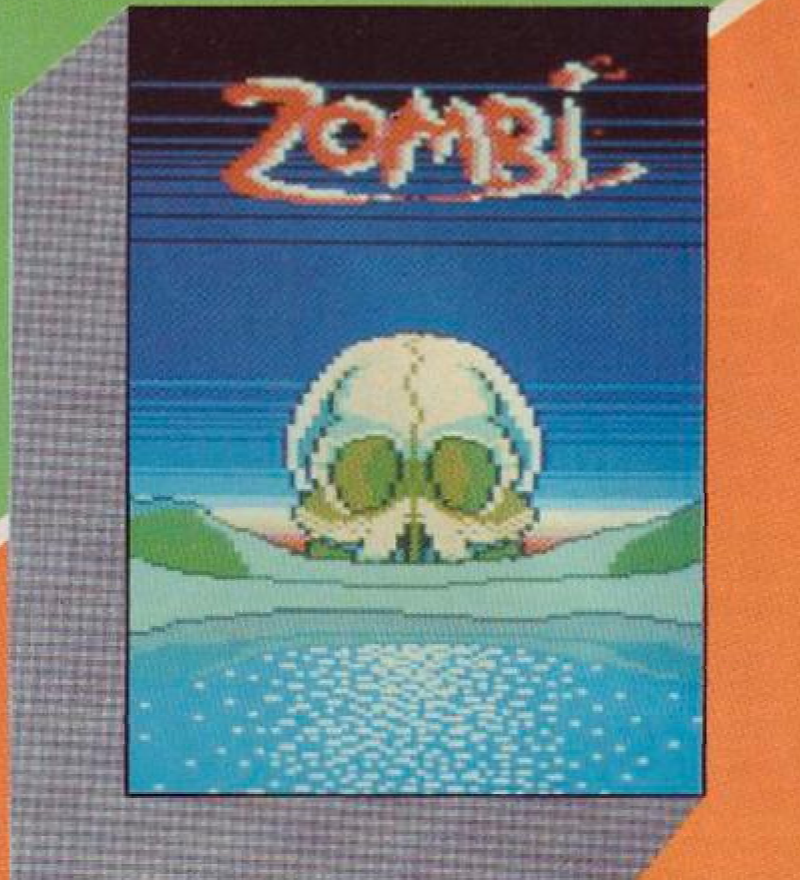


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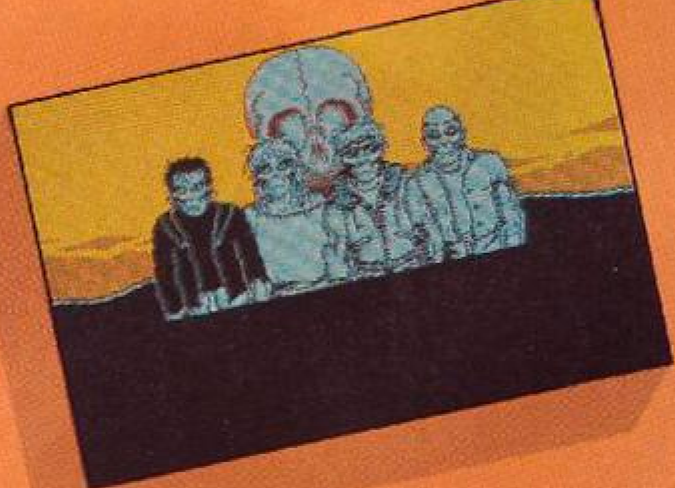




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Double height

Great stuff from Leighton Derrick of Port Talbot. He has shown that it is possible to print double-height characters using only Basic commands – no need to revert to machine-code. Well done.

Unfortunately it is rather slow, but then that's Basic for you. Following Leighton's offering is a machine-code alternative – note the speed difference!

The message you want printed in double height must be inserted within the quotes on lines 40 and 110. The number 26 in line 50 indicates that the character(s) to be displayed total 13*2; therefore if your sentence comes to 20 characters, the number will be 20*2 which is 40.

Following the 26 in line 50 are the symbols '*1'. The figure after the multiplication sign ('*' in Basic) will have to be altered depending which screen mode you are using. As it is set up, it's ready to use in Mode 1; changing the number to 0.5 will allow you to use it in Mode 2, and a 2 allows use of Mode 0.

```
1 ' Double height
2 ' Leighton Derrick
3 ' Amstrad Action   Dec 86
4 '
1Ø INK Ø,Ø:INK 1,24:PAPER Ø:BORDER Ø
2Ø CLS:TAG:PLOT 1,15,1
4Ø PRINT"DOUBLE HEIGHT";
5Ø FOR X-Ø TO (8*26)*1
6Ø FOR Y-1 TO 16
7Ø IF TEST(X,Y)-Ø THEN 9Ø
8Ø PLOT X-18Ø,(Y*2)-2ØØ,1
9Ø NEXT Y:NEXT X
11Ø PLOT 1,15,Ø:PRINT"DOUBLE HEIGHT";
```

Following is the machine-code double-height routine. Type it in. If entered correctly, a message will be returned in double height; otherwise you get an error message – in normal height!

The letters you wish to print in double height must be held in a string (for example, a$="WELCOME TO DOUBLE HEIGHT"). Follow this with a call to the machine-code program which prints the contents of the string: CALL &8ØØØ, @a$ in line 60.

```
1 ' Double height with machine-code
2 ' RpM   Amstrad Action   Dec 86
3 '
1Ø FOR a-&8ØØØ TO &8ØØD:READ a$
2Ø b-b+VAL("&"+a$)
3Ø POKE a,VAL("&"+a$):NEXT
4Ø IF b<>&367Ø THEN PRINT"ERROR":STOP
5Ø a$-"DATA OK -- WELL DONE"
6Ø CALL &8ØØØ,@a$:PRINT:PRINT:END
7Ø DATA DD,66,Ø1,DD,6E,ØØ,7E,F5,C1,E5
8Ø DATA DD,E1,DD,23,DD,66,Ø1,DD,6E,ØØ
9Ø DATA 2B,C5,23,E5,7E,47,CD,Ø6,B9,F5
1ØØ DATA 78,CD,A5,BB,DD,21,68,8Ø,Ø6,Ø8
11Ø DATA 7E,DD,77,ØØ,DD,23,DD,77,ØØ,DD
12Ø DATA 23,23,1Ø,F2,F1,CD,ØC,B9,3E,FE
13Ø DATA 21,66,8Ø,CD,A8,BB,3E,FF,21,7Ø
14Ø DATA 8Ø,CD,A8,BB,3E,FE,CD,5A,BB,3E
15Ø DATA ØA,CD,5A,BB,3E,Ø8,CD,5A,BB,3E
16Ø DATA FF,CD,5A,BB,3E,ØB,CD,5A,BB,E1
17Ø DATA C1,1Ø,AE,C9,ØØ,ØØ,ØØ,ØØ,ØØ,ØØ
18Ø ' Define a string variable, eg
19Ø ' a$-"HELLO, READERS"
2ØØ ' then CALL &8ØØØ,@a$
```

Arrows and hats, we made a hash

Do you have a problem with your printer giving £ when you want #? So did we. Line 10 of the first listing in Problem Attic last month first came out as £0 in two places. Eagle-eyed editor noticed it at 3 a.m. and printed out #Ø on two itsy-bitsy papers to be stuck over. Unfortunately at 4 a.m. Toot pasted one of them upside-down. So Ø# should be #Ø.

CPC Basic uses the # – in computerese the sign is called hash – to mean the following number is a 'stream director'. Try looking that up in your handbook's handy index. Ha. Streams 1 to 7 are screen windows; stream 0 is the full screen. Stream 8 is the printer and 9 is a disk or cassette file. The system assumes 0 unless you say otherwise. So the function POS(#Ø) in that Problem Attic program tells which screen column the cursor is in. In assembly language # is used to mean the following number is a value rather than a memory location.

The ˆ and ↑ cause similar confusion. On CPC keyboards it's the key shared with £ (the pound sign) two east of the zero. (On the PCW, after a half-hour's messing about, you can get it by pressing Extra and + together. Not very friendly.) Some printers show it as ˆ (called caret or circumflex or even hat).

Basic understands both – they have the same Ascii code – to mean index or exponent or power. By hand you would write two cubed as $2^3 = 8$, and on a steam-powered typewriter you could roll the paper back a bit. Neither is possible on screen, so you use the up-arrow.

Now, if all this comes back correct from the typesetter, I think we have permanently licked the problem. And *AA* listings in future will be much cleaner in appearance than was possible on the dot-matrix printer.

● We neglected to mention in the *Simon* listing (November Type-ins) that it was for the 664 and 6128 only. Apologies to any frustrated 464 users.

● The *GIGO* program was correct as listed (October), but dozens of readers wrote or rang with problems. The most common mistake was confusing the number '1' with a lower-case 'l' used as a variable name around line 330 – our new style guide will avoid this in future. Data statements had other pitfalls: typing fullstops instead of commas or numbers larger than 255.

Some *Amstrad Action* Type-in guidelines

One daunting task confronting all type-in freaks is that of deciphering listings.

To make matters simpler for the typist – who is probably not an expert programmer – we have set out a few pointers on style that we would like you to follow if you plan to send a type-in listing to Amstrad Action. Setting out your listings in this way will give you more of a chance of seeing your masterpiece on one of these pages.

1 Most important of all is sensible use of variable names or letters.

DO

☆ use lower-case for variable names, rather than capitals

☆ use short but meaningful variable names

☆ use integer variables (for example, a%) if you want to speed up execution time

DON'T

✕ use letters that can be confused with numbers. Especially avoid the small letter 'l' or capital 'I' and both small 'o' and capital 'O'. Even 'B' can look like '8' on some printers.

✕ use variable names identical to command words (you can't)

2 It is very useful to have adequate REM statements in the listing. For one thing, it makes it easier for human beings to read. Six months later someone with a pile of tapes can remember what any one is about and where to find the AA article about it.

DO

☆ put the program name, source and date at the beginning of the program

☆ put a REM statement before every subroutine to outline its purpose

DON'T

✕ go mad putting REMs after every line

✕ put your life story in REM statements

3 Avoid long multi-statement lines. They are difficult to follow, and just invite typing errors. Short lines make debugging easier too: 'Error in line 432' is only half helpful if line 432 is half a mile long.

DO

☆ split up complicated mathematical routines

☆ keep lines short – 40 characters is a good maximum

DON'T

✕ have long lines of DATA statements (keep 'em short)

✕ put command words and REM statements on the same line

4 Structure your programs – divide them into sensible procedures. This makes it easier for us to follow, easier for you to debug, and in the long run will develop your programming skills.

And need we say ... If you send us anything, please make sure your name and address (in human-readable form!) is on every single piece, especially the label of the cassette or disk. And keep a copy.

YOUR LOFTIEST QUESTION ANSWERED.

PROBLEM ATTIC



This month the Attic is flooded: with pleas, requests, death threats and blackmail notes for help with cassette loading. We'll deal with the main body this month, but you will have to wait 30 days for the rest of the story.

Messages, messages – the erroneous type

Cassette users see those familiar read or write error messages rather too frequently. Message pops up, system crashes. All very infuriating. Here is an analysis of these errors – when they occur and why.

Read Error a: The data bit read was too long. This occurs if the cassette is halted during loading or cataloguing. It may even happen if there is a lot of wow. ('Wow' sounds like what it means: the tape motor running at an uneven speed.)

Read Error b: There has been a CRC (cyclic redundancy check) fail. This is the most common of the errors and can occur if there is dust or a defect on the tape surface.

Read Error d: I tried desperately to attain this error message, but failed to do so. It indicates that the block read was too long. The only way to get this error, it seems, is to program it deliberately.

Write Error a: The write frequency is set too high. This again can only be programmed intentionally. So you shouldn't ever encounter this and the previous error message.



We have – but don't want

Read errors can be caused by dirty tape heads or pinch rollers – this could lie with any tape deck. In Amstrad 664 and 6128 machines, the problem could be with improper setting of volume and tone controls. Owners of the 464 don't have this problem as these levels are preset.

Your recording heads could do with a good clean fairly often – especially if you frequently use low-grade cassettes. The best way is with cotton buds dipped in methylated spirits (or similar). Definitely do not use abrasive detergents or sharp objects. Ensure that the head is dry when you finish.

As well as the head, the pinch roller (usually rubber, to one side of the mechanism) should be given the treatment. Using a 'cleaning tape', which you can buy from a hi-fi shop, will give the best results. Dirty pinch rollers can be the cause of many a problem: they can make the tape speed vary or, even worse, they can eat or crease your tape.

One final step to improve the performance of your cassette deck is to align the tape head – the azimuth angle. Azimuth, from Latin, means 'degrees of arc above the horizontal'. In the case of cassette players, it means the angle of the head relative to the horizon – the magnetic tape inside the cassette shell.

There are various commercial azimuth aligners on th market. If you are considering getting one of these package Interceptor and Global Software are but two of the man manufacturers.

On the outside trying to get in?

The 664 and 6128 machines need an external cassette recorde if tape programs are to be loaded into memory. Naturally, new set of problems is likely to come into play.

Positioning of the cassette deck and leads can be crucial fo satisfactory loading or saving. The recorder should not be to close to any magnetic field – such as the monitor. Likewise, th leads shouldn't run parallel to mains leads, or close to magnet fields. The reason is that tiny impulses in the cassette leads ca easily be distorted. (And of course tapes or disks should neve be placed on top of the monitor.)

Whenever possible, use a tape deck that runs from mai electricity. Battery-operated decks are prone to fluctuatin power signals, which causes a degree of wow.

Everyone's favorite now: tone and volume settings. (Mem ories from my Spectrum programming days.) Being the harde and the most annoying to set correctly, they are the mo common cause of data loss. The volume should be set fair high. However, if it's too loud, distortion results – poor o Arnold will get an earache. The tone should be set betwee three-quarters and full, giving a high (trebley) sound.

If you go carefully through all these procedures and y still have read/write problems, there is either something wro with your tapedeck or the software you are trying to load faulty (ie. the tape has been corrupted).

Next month *Amstrad Action* will feature an ingenious listi from J Keneally of Exeter. His program actually checks th health of your tape drive – 'not for azimuth but for defects in th mechanics.' Sounds intresting, doesn't it? Well, I can tell y that it works – it certainly does what it claims to do. Enough, y will have to wait till next issue.

Firmly in deep

Having recently purchased the DD1 firmware manual to go with the disk drive, I thought I would be able to make use of the routines in the CP/M rom. After days of desperation, you are my last hope. Please could you explain how I should go about using the 'Read sector', 'Format track' and other BIOS jumpblocks? None of them seem to work!

Robin Mathews
Wokingham, Berkshire

You may well have jumped in the deep end with this on However, I am assuming yo have an assembler and a fa knowledge of assembly la guage. I know of various stu blingblocks with the DD1 firm ware manual – the main o being that it is wrong in certa places!

I'll use the 'Read secto extended BIOS command as m example. This actually allow you to read a physical sect from a disk, and place the da

YOUR LOFTIEST QUESTION ANSWERED.

PROBLEM ATTIC



in a store (buffer) of your choice.

Using the legal (recommended) method for accessing these extra commands, you must load the HL register pair with the address that points to the command number. 'Read sector' happens to be three. Next, a call to &BCD4 (KI Find Command) will return, in the HL, the routine address while the C register contains the rom number. The CP/M rom usually positions itself in slot number 7.

You may well have got this far, only to find it hasn't worked correctly. The reason is that the CP/M rom is classed as a foreground rom and consequently has to have 129 (&81) added to the command number. This means adding &81 to the 'Read sector' command number, giving a new value of 132 or &84.

So far so good. We must now store the register contents in memory, as we shall need them shortly. The rest is fairly simple. The registers must be set up as described in the manual. This is followed by a call to the correct rom address (using the RST 3 instruction).

The example below will load the first sector of track 0 into memory location &4000. The disk is assumed to be in data format, but it is simply a matter of changing the byte held in the C register to allow reading of CP/M or IBM disks.

```
          ORG &9000
          LD HL,command
          CALL &BCD4
          LD HL,store
          LD A,C
          LD (store1),A
          LD HL,&4000     ;buffer to load sector data
          LD E,0          ;drive number
          LD D,0          ;track number
          LD C,&C1        ;sector number
          RST 3,store     ;jump to rom address
          RET
command:  DEFB &84
store:    DEFW 0000
store1:   DEFB 00
```

Just a second?

Is it possible for a second drive to work on a 464 without the first?

Craig Rickaby
Newton Aycliffe, Durham

On first reading, your question sounded double-dutch. But now we see what you mean. And the answer is: Afraid not, Craig. The reason is that the first drive also has an interface attached to it (which is why it costs more). This is what you have to plug into the back of your computer – it allows the computer to communicate with the drive and thus pass information to and fro; not only that, part of the CP/M operating system is contained on the rom inside the interface.

Poetically put

Frustration is great,
tension is high;
if you can't help,
I fear I'll die!
Reference, of course,
to the firmware guide.
I cannot think
where it may hide –
is it available
on this date?
Please help me work
my 6128!

John Thompson
Paisley

For a pair of tenners (less a bob) Amsoft (Brentwood) will gladly lob the book in the post for you.

Multiple help!

Is it possible to produce scrolling messages from right to left in Basic?

Is there a gadget out which will convert Amstrad monitors into a television? If so, will it work with a green monitor?

Which tape-to-disk rom cartridge is the best to buy?

Is it possible to save programs onto disk in data format rather than system format?

Why do I lose control when I play games with two joysticks plugged in?

S Law
Littleborough, Lancs

Well, Mr Law, you do ask a tall order. Answering your questions sequentially:

Yes, we hope in the next issue to publish a type-in explaining all. Arabic scrolling, you might call it.

There are TV tuners on the market: one from DK'Tronics (£70), the other from Screens (£78). A colour picture will be possible only if you have a colour monitor; green-screen users will be stuck in shades of green!

In our opinion the Multiface II is number one. Watch out for next issue: we should have a comparative review of tape-to-disk hardware.

Quite simply, yes: either format.

Sounds as though the two joysticks are shorting one another out. Try using different joysticks. Otherwise you may have a problem with your joystick port.

Bingo

I run a weekly bingo session, and was wondering if you could write a short program to generate a random number between 1 and 90. The numbers generated should be printed on screen along with a count of numbers called.

D R Brown
Laindon, Essex

And no number should be called twice. Over to you, readers: a problem to ponder in your attics. We'll publish the best one next month. Have a look at the new style guidelines printed in the Type-ins pages.

Radioactive Arnold

I would like to comment on Mr T Davies' problem in the September issue concerning radio inteference caused by Arnold.

It is my considered opinion that the interference is caused by magnetic radiation. For example, if you take an ordinary calculator and place it close to a portable radio, the radio can then be tuned into the calculator. Pressing a button (on the calculator) causes a different-frequency note (noise) to be emitted from the radio.

The only way to remove this inteference would be to screen and earth your Amstrad – not the most practical solution. However there is no need to worry as this radiation causes no harm, and is around us at all times.

Len Phillips
Rhondda, Mid-Glamorgan

Seeking Oasis

I am writing this letter in desperation. Two months ago, I bought a utility program, *Laser Genius*. My problem is that the program seems to have a bug. When assembling or disassembling to the printer, carriage-returns and linefeeds are occasionally missed.

After writing to Oasis and still not receiving an answer, I am stuck. Please help.

M B Smith
Bridgend, South Wales

Unfortunately, Mr Smith, Oasis Software just recently went bust. Ocean, which have comissioned Oasis to write several programs, is uncertain whether to continue support for Laser Genius. *I'm afraid all you can do at present is wait and see.*

Pascal at college

Having recently started college and A-level computer science, I find we need to learn Pascal. I own a 6128. Could you tell me what versions of Pascal are available, and how much they cost?

Keep up the good work at the Old Barn. When my grant finally arrives (if), I shall certainly subscribe to AA.

Julian Smalley
Selston, Notts

Right, Julian, here are a few suggestions:

Turbo Pascal 3.0 (CP/M 80) at £57.50; DR Pascal/MT+ at £50 from Digital Research; Pro Pascal Compiler by Prospero Software.

In the September issue Andy Wilton reviewed two others: the Pascal 80 CP/M compiler at £40 from Hisoft and Oxford Pascal by Systems Software (Oxford) Ltd, at £25.

Hot tips

Welcome to this new section. Have you an astounding new hint to pass on? A trick you've discovered Arnold can or can't do? Share your tips with the world. This is the place to send them.

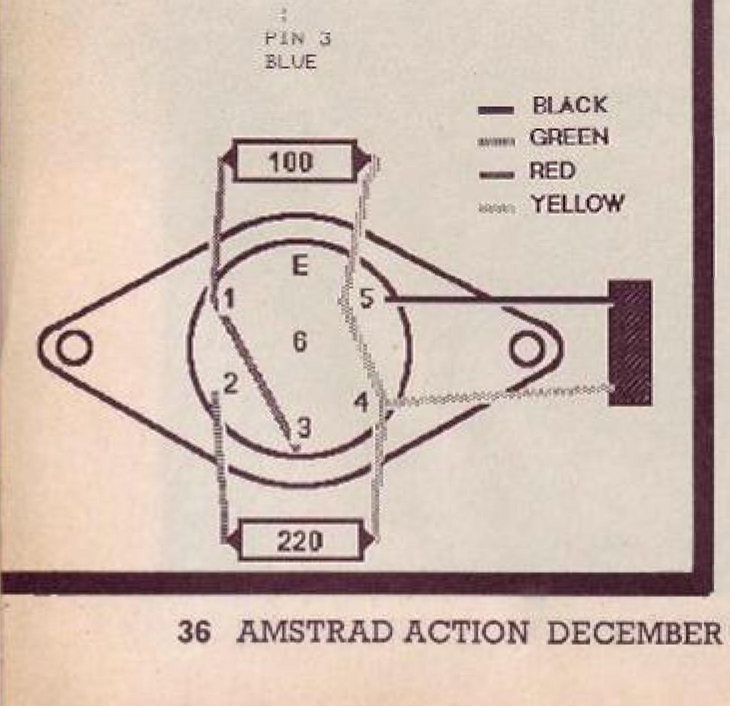
Socket to me, said the Spectrum to the Amstrad

This little hardware widget allows you to use the output from a Spectrum and display it on an Amstrad monitor. Follow the instructions carefully and you should have no problems.

First, go and buy a six-pin DIN socket (similar to the one pictured in your manual), and a couple of resistors – 100 ohms and 220 ohms will do. Connect wire from the 'Signal out' of the Spectrum to the 'Signal in' (or aerial socket) of the television set, then cut off the 'Aerial in' socket and carry out the following steps:

1. Remove centre pin (6).
2. Link pins 1 and 3, using one tail of the 100-ohm resistor, keeping the wire close to the plastic.
3. Push the free end of this resistor through the hole in pin 4.
4. Wire the 220-ohm resistor across pins 2 and 4.
5. Connect the core of coaxial cable to pin 4.
6. Connect the shielding to pin 5.

Bryan D Archer
Kirkcaldy



Sorting colours on the Grafpad

When the Grafpad was first released, reviews said, 'Good piece of hardware, but no indication of how to use your pictures in your own program.'

In fact, this is very simple. When saved, your picture is 17k long and called '*filename*.pic'. One thing to note, however, is that the default colour C1 on the Grafpad and the colour in Ink 0 on the Amstrad are not identical. I have written a short program that will allow you to load a Grafpad picture using the correct colours.

```
 1 REM Amstrad Action  Dec86
10 MODE 1:INK 0,0:BORDER 0
20 LOAD"FILENAME.PIC"
30 WHILE INKEY$="":WEND
```

Mick Ellick
Nailsea, Bristol

Tale told

It is now official! From Amstrad headquarters comes this astounding piece of information:

Your 464 is known as Arnold (yes, I know that is common knowlege). The rare 664 breed are called IDIOTs (Insert Disc Instead Of Tape), and the jolly old 6128s are called BIG IDIOTs (I'm sure you can work that one out for yourselves).

An Amstrad Official
Brentwood, Essex

GAC busters

Fairly simple adventures can be made different each time the game is played by putting certain objects in randomly selected locations. This can be done with GAC (*Graphic Adventure Creator*). This example deals with object number 3:

Select the 'object' option and define as usual, placing in any location. In the 'high priority' mode insert the following lines:

```
IF RESE n 3 TO RND x SET n END
IF 3 IN 0 RESE n END
```

In plain English the first line says, 'If marker *n* is reset then put object 3 in location number defined by RND *x* (where *x* is a number equal to or less than the total number of locations) and then set marker *n*'. The second line checks that object 3 has not finished up in location 0 (limbo room); if so marker *n* is reset so that line 1 will be executed again.

Mick Ellick
Nailsea, Bristol

It is not possible to have two or more greater-than (>) or less-than (<) signs in one command line using GAC!

Smurfy The Warlock
Accrington, Lancs

Dazzling border

Here is a quickie for you:

```
10 FOR t=60 to 70:OUT &7F00,t
20 NEXT t:GOTO 10
```

Blast the bankman

After several sleepless nights, I have finally found a way of incorporating the *Bankmanager* routine into your Basic listing. This avoids the need to load *Bankmanager* before running your own program.

Just insert the short routine somewhere into your own listing:

```
100 GOSUB 130
110 ' rest of your program
120 END
130 ' bank user routine
140 x=HIMEM-15:MEMORY x-1
150 RESTORE 220
160 FOR y=x TO x+15
170 READ a$:POKE y,VAL("&"+a$)
180 NEXT:a%=0:CALL x,@a%
190 MEMORY x+15:x=HIMEM-&524
200 MEMORY x-1:LOAD "bankman.bin",x
210 CALL x:BANKOPEN,0:RETURN
220 DATA 0E,FF,CD,15,B9,EB,DD,66
230 DATA 01,DD,6E,00,73,23,72,C9
```

J Andrews
(by telephone)

Printer dump for *Screen Designer*

I enclose a poke that enables screens drawn by Amsoft's *Screen Designer* to be dumped to a printer using any screen dump package (*Tascopy* is my preference). Follow this procedure:

1. Run *Tascopy* (or equivalent)
2. Run the program below
3. Follow prompts, and insert cassette with pic.

The picture will load as normal. On completion, a copy will be dumped to the printer.

```
 1 ' Amstrad Action   Dec86
10 ' cassette owners only
20 MEMORY 12247:MODE 2
30 PRINT "INSERT CASSETTE - PRESS A KE
40 LOAD "":POKE 12403,255:CALL 1224
50 |COPY
60 ' TASCOPY uses this command
70 ' to dump a screen to the printe
```

Peter Walklett
Leuchars, Fife



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Tape to disk with a touch of control

DISCOVERY PLUS Siren Software (061-848 9233), £14.99, disk only

Discovery Plus is a revamp of Siren's original tape-to-disk *Discovery*. There have been vast improvements concerning ease of use, presentation and general performance of the software.

Included on the disk are 'Tape Disk', which was previously sold on its own as a headerless copier, 'Tape Disk 1', a revolutionary multi-copier program, and 'Splock Trans', which deals with the DJL Speedlock loaders (a protection system used by some software houses).

The original *Discovery* has also been put on the disk. We reviewed this in the February issue; suffice to say that *Discovery* transfers ordinary block-saved programs from cassette to disk. It will rename or relocate the files to make them compatible with the disk operating system.

Siren's new improved Speedlock transfer program (sounds like a commercial for soap powder), called 'Splock Trans', will need approximately 52k of free disk space, as it has been configured to handle even the longest of programs. This routine asks for a name under which to save the program and proceeds to load the game as normal. Once loaded, the disk motor will start up and, hey presto, it's on disk – magic. After the transfer has been completed, the game will start normally.

For those awkward headerless files on cassette – another common form of protection – 'Tape Disk' is available to transfer them to disk. However, they will not run independently; they must be run from within the 'Tape Disk' program, which is designed to discourage piracy.

'Tape Disk 1' is a most amazing piece of programming. It transfers software to disk at the touch of the Control key. The program loads and runs the game as normal; as soon you press Control, the game is on disk. It is similar in principle to the various hardware devices on the market – such as *Multiface II* by Romantic Robot or the *Mirage Imager*.

It has its limitations obviously. Although many cassette software titles are easily transferred – especially those with loading music – 'Tape Disk 1' needs a completely free computer: all expansion roms and interfaces must be removed (with the exception of the disk interface, of course). Programs saved using this method need the original 'Tape Disk 1' program present on the same disk. Furthermore, whatever was saved on a 464 will work only on a 464, what was saved on a 664 will run only on a 664 and so on.

Discovery Plus must be the most advanced, and probably the most efficient, tape-to-disk transfer utility to date. You do pay for the privilege, though: £15 is nothing to sneeze at.

It must be noted that this program takes steps against piracy – particularly that the *Discovery* file must always be present on the disk.

GOOD NEWS
- ▶ Will transfer lots of programs.
- ▶ Easy to use and understand.
- ▶ Takes steps against piracy.

BAD NEWS
- ▶ Mortgage your Amstrad.
- ▶ Can't copy everything.

Manage your disks with delight

HANDY MAN Siren Software (061-848 9233), £12.99 disk only

Siren has come up with another marvellous piece of software. This is a package to give the disk user a wide range of 'housekeeping' utilities.

The thing that immediately strikes you with this product is the new packaging and layout in general – a much more professional touch. This approach is continued with the program's menu systems: all prompts are very user-friendly, and confirmatory messages appear at appropriate stages.

On loading *Handy Man*, you are presented with a fairly impressive list of options. Some very original and technically brilliant routines are available. These include a 208k formatter, an option to save the entire contents of a disk to cassette, and a very useful search routine for finding those Ascii messages on disk.

One option causes an eight-page manual about *Handy Man* to be dumped to the printer. It's all very well if you have a printer, but what about those without? Not to worry: another option lets you read on-screen instructions for any routine.

The 'Superform' routine has all the facilities for formatting the usual CP/M, data and IBM disks. The fun starts, though, when you are given the extra choice of 'Sup202' and 'Sup208'. These give 202k and 208k free disk space – about 24k more than standard formats. They work by writing a file in ordinary format onto the disk; when executed it gives you all that extra disk memory to use. It is even possible to use these formats under CP/M, as several COM files have been supplied – great stuff.

Suppose you wish to transfer files from a data-formatted disk onto your new 'Sup' formatted disk. A program entitled 'Trans File' will do the job for you. 'Trans File' can cope only with program lengths of 38k or less – so unfortunately you are stuck unless you are in the know.

'Disk Release' has two options. One allows you to 'release the disk' while the other 'restores the disk'. Releasing a disk will cause its contents to be written to cassette. You are prompted for a disk name as well as the date (very handy, as these are quite easily forgotten). The data will be written at 3000 baud in 4.5k blocks. Therefore at least 20 minutes of tape will be required, as there can be up to 40 blocks, each taking 25 seconds to save.

Restoring a disk will require an unformatted disk, or a disk whose contents you do not mind being over-written. The process is the exact reverse for releasing a disk. These two options are excellent, especially when disk space is at a premium.

Searching a disk for a particular string (even control characters from 0 to 31) or a group of hex numbers couldn't be easier than with 'Disk Search'. Enter the string you wish to find, and the program will search each track. When it locates the string, Disk Search will enter its edit mode, allowing you to alter the contents of the sector being displayed. The search can be continued by pressing a function key. A maximum of 25 Ascii characters or 10 hex numbers may be searched for – more than enough for most purposes.

File Search is a small offshoot of Disk Search. With this option, you can enter a filename and be presented with a hex dump of the first sector of the file, ready to edit. You can easily step on to following sectors.

'Menu Maker' is the final program in the *Handy Man* suite. This copies the file 'Menu' onto your disk. Run the program to see its effect. It is actually a disk file manager, which allows 'selected' files to be displayed, giving the option to load or run any of them.

Using 'Select' and 'Unselect' is handy if you select all loader files, and unselect all other subsidiary files. In this way, every time you run 'Menu', there is no confusion about which files can be run.

Handy Man does take the drudgery out of disk management.

GOOD NEWS
- ▶ Very user-friendly.
- ▶ Disk Managment becomes a joy.
- ▶ Amazing new 208k format.
- ▶ Search option is very fast.

BAD NEWS
- ▶ 'Trans File' does not copy files larger than 38k.

AMSTRADS AND ARTIFICIAL INTELLIGENCE

by Patrick Hall Sigma Press paperback £8.95

ISBN 1-85058-038-3

Not being very interested in all the newspaper hype about artificial intelligence, my initial reaction was to snub this book. However after sitting down for several hours, with the intention of merely scanning the pages, I found myself deeply engrossed in the subject matter.

Patrick Hall certainly has a knack for keeping the text lively and flowing. I caught myself giggling at various stages – amusing results can happen when using computers for this purpose.

The book starts each chapter with a brief history of AI during a certain period in its development. Following this is a program for the reader to type in – it usually has some relevance to the text before hand.

Starting from the beginning, Mr Hall introduces us to AI with a program that composes music – and which more generally is capable of simple creativity. This is illustrated by Ode, a simple program that generates verse in rhyming couplets – the output can be a little short of hilarious.

Each program is clearly written, with every subroutine distinctly labelled. The 'commentary' on the routines is quite unbelievable: practically every line is dealt with separately, giving detailed descriptions on what task they perform.

During the Second World War, computers were used for breaking codes; eventually from these humble beginnings rose the translators. These programs attempted to translate one language to another. Unfortunately all kinds of problems crept in here, as demonstrated by a program that translates German into uproarious English.

Many such topics are discussed in *Amstrads and Artificial Intelligence*, with practical programs that are substantial productions of landmarks in AI. Some are actual recreations of great developments witin this field.

If you fancy a good relaxing read on a topic on the frontier of today's technology, without anything too technical, then this is a must. I just wish there had been more to the book – my desire for knowledge had not been quenched. The history side of things was rather rushed, with program listings and explanation taking up seventy per cent of the text.

GOOD NEWS	BAD NEWS
► Enjoyable reading. ► Excellent demonstration programs. ► Nothing technical.	► Perhaps too little information. ► Too many listings.

ADVANCED AMSTRAD BASIC

by Joe Pritchard Melbourne House paperback £12.95

ISBN 0-86161-202-7

Has Melbourne House gone mad? How can a publisher have the audacity to charge £13 for such a book? Some of this author's previous efforts from the same press have been almost twice as thick for hardly half the price.

Apart from that outburst, I have only praise for this publication. It is written by a very talented man. Joe Pritchard's previous book, *Ready-made Machine-Language Routines for the Amstrad*, was one of my favorites, and most certainly helpe me with my assembly-language programing.

Advanced Amstrad Basic assumes you have a fairl thorough knowledge of Basic, with a minimum amount o assembler – which is only to be expected, otherwise it woul have a different title!

Chapter 1 starts with graphics and animation. There ar clear listings, showing you how to print characters of any size a any angle – even multicoloured. Each routine is clearly ex plained, encouraging the reader to take the bull by its horn and alter the programs to suit his or her requirements.

I was impressed with the graphics routines, which mad use of 'transformations'. A shape can be transformed b carrying out mathematical operations on it. Here matrices com into play – I always wondered, while slaving away at my math homework, what use they would be in the real world. The boo goes into just enough detail, giving plently of short routine without putting the reader to sleep.

Sound is the following chapter; this covers all the soun commands available to the user under Basic. Especially de tailed are the sections covering tone (ENT) and volume (ENV envelopes. There is a section on playing music under interrup using the ON SQ instruction. It is a pity this was not covered i greater detail – even a small section on how to produce th desired effect via machine-code would not have gone amiss.

Mr Pritchard has steered well away from generating soun using machine-code. The reason for this is that Basic gives yo so much control over the sound chip; even producing a sho buzzing noise in machine-code is a very tedious and drawn-o process.

There is a useful section in the book that shows how, whe and why Basic lines, variables, strings and so on are stored i memory. By poking the appropriate values into the corre memory location, Basic programs can be altered during ru time – it's all detailed in the book if you care to discove Included is an explanation on how to create faster-running Bas programs; this entails integer variables, multi-statement line and removing REM lines.

Directly following is a large chapter devoted to explainin and using RSX routines (resident system extensions – ba commands). Using this system, variables can easily be passe to machine-code routines. There are a number of interestin programs for the user to type in and modify, including a enhanced catalogue, a pause facility and even a routine inspect data from any roms you may happen to own – all a used via RSXs and should really get you to grips with the us and control of them.

You are taken on a guided tour of the screen, with goo examples on manipulating it. It is about time someone made decent attempt at unveiling the mysteries or rather complexiti of the screen. A lot of effort has gone into this tiny b informative chapter – included are notes on the CRTC (cathod ray tube controller) and the registers, what they do and wh happens when you alter their contents.

The final section in the book is programming tips. Not on is information provided for tidying and structuring yo programs, but hints on error-checking, debbuging and clev use of command words are also thrown in. One particular good area covered was cassette systems and ways of elimin ing loading or saving errors – there doesn't seem to be a tri passed by.

All in all, a very well written, easy-to-follow and enjoyab book. The effort the author has taken to put across ideas exceptional. I'm sure that after reading it many of you will only too eager to jump into lower-level programming la guages. Thoroughly recommended!

GOOD NEWS	BAD NEWS
► Well written – easy to follow. ► Goes into detail on obscure subjects. ► Will develop your programming skill no end.	► Far too expensive.

Absolute Beginners

Looping the loop this month: Basic novices, wend your way in Andy Wilton's crash course

Last month we saw how we can make our instructions to Arnold *conditional* – how we can tell him to do one task or another depending on circumstances. To do this we need the commands IF, THEN and ELSE, which are used like this:

```
30 IF b=0 THEN PRINT "You can't divide by zero"
ELSE PRINT a;" divided by ";b;" equals ";a/b
```

When Arnold comes to a line like this he works out whether the *condition* – 'b=0' in this example – is true or false. If the variable 'b' has the value zero then Arnold obeys the PRINT command between THEN and ELSE, but if 'b' has any value other than zero he'll obey the PRINT after ELSE instead.

Conditions like that 'b=0' are the heart of IF-THEN-ELSE lines, but that's not all they're good for. The commands WHILE and WEND also use conditions.

WHILE-WEND LOOPS

Let's look at a simple program to move a square around the screen. It's very much like some that we saw earlier on in *AB*, when we were looking at variables and expressions.

```
10 MODE 1
20 FOR a=370 TO 0 STEP -10
30 CLS:MOVE 310,a
40 DRAW 330,a
50 DRAW 330,a+20
60 DRAW 310,a+20
70 DRAW 310,a
80 NEXT a
```

This draws a small square, drifting down the screen till it reaches the bottom. That 'STEP -10' tells Arnold to reduce the loop variable 'a' by 10 every time he runs through the loop, until 'a' goes below the second operand of the FOR command – zero, in this case.

Now that's all very well, but it's not quite the effect I'm after. Really I want the square to gain speed as it moves down the screen, so that it looks as if it's falling. In other words I want it to move down by a greater amounteach time through the loop, rather than the 10 units fixed by the STEP size.

There's nothing too difficult about getting the square to gain speed. Edit lines 20 and 80 to look like this:

```
20 FOR b=0 TO 50 STEP 5
80 NEXT b
```

Now add these new lines, and then try the program out:

```
15 a=370
75 a=a-b
```

This does the job, up to a point. The square certainly looks a lot more as if it's falling, but unfortunately it doesn't get as far as the bottom of the screen. The problem is, there's no easy way to work out what FOR or STEP operands will get the square just to the bottom of the screen.

When we had the original listing it was simple. The loop variable 'a' represented the height of the square above the bottom edge of the screen. We could use the second operand of the FOR command to stop the loop (and thus the square) at some particular value of the loop variable: some particular height above the bottom edge, in other words. With the second operand of FOR set to zero, the square kept on moving down until it was just about to go off the bottom edge.

Now, however, the loop variable is 'b'. This represents the amount by which the square moves down each time – its downward speed, in other words. We can only use the second operand of FOR to limit the maximum value of 'b', so we can't tell Arnold that way the *height* we want to stop at: just the *speed* we want to stop at. Either we work out how fast the square's going to be moving when it hits bottom (and who wants to do that?) or we spend five minutes trying different FOR and STEP operands.

A BETTER WAY

If neither of those two solutions appeal to you, don't worry – there's a better and simpler way. Edit lines 20 and 80 so that the whole listing looks like this:

```
10 MODE 1
15 a=370
20 b=0:WHILE b<=50:b=b+5
30 CLS:MOVE 310,a
40 DRAW 330,a
50 DRAW 330,a+20
60 DRAW 310,a+20
70 DRAW 310,a
75 a=a-b
80 WEND
```

If you run this you should find it behaves exactly the same as i did before the alterations. In other words lines 20 and 80 form a loop which sets 'b' to 0, adds 5 to 'b' for each time through the loop and then stops when 'b' goes over 50.

If you look at line 20, you'll see that it breaks down int three separate commands. The first and last of these ar familiar: 'b=0' sets 'b' to 0 while 'b=b+5' adds 5 to 'b'. Tha means that 'WHILE b<=50' and the 'WEND' in line 80 form th loop, and stop it when 'b' goes over 50.

From this you should be able to see that WHILE and WEND are rather simpler than FOR and NEXT. WHILE-WEND loop don't have loop variables: in the above example, 'b' is n different from any other variable. The only thing WHILE-WEND loops do have is a condition: 'b<=50', in this case.

Just as with IF-THEN-ELSE, this condition determines whic of two things Arnold does. If 'b' is less than or equal to 50 the the condition is true, and Arnold repeats the loop. If 'b' i greater than 50, however, the condition is false and Arnol stops repeating the loop.

This still doesn't solve our problem – after all, it only doe what our program already did with FOR and NEXT. We ca soon change that, though. If you remember, our problem wit FOR was that you could limit only the loop variable 'b', and w wanted to limit the height 'a' instead. There's no such proble with WHILE. There's nothing special about any of the variable as far as WHILE is concerned.

At the moment the WHILE condition just tests for 'b' goin over 50, but it could just as easily test for anything you can wri a condition to test for. If we change line 20 to

```
20 b=0:WHILE a>=0:b=b+5
```

then Arnold will carry on looping until 'a' is less than zero. Th means that Arnold will stop repeating the loop only when th square is about to go off the bottom of the screen – and that i just what we were after.

WHILE-WEND vs FOR-NEXT

We now know two different sets of looping commands. Le compare what they do.

In a FOR-NEXT loop, Arnold sets a variable to some startin value. Each time he repeats the loop he adds a fixed number the step size – to this variable. He stops repeating the loop onc the variable goes over some given upper limit.

In a WHILE-WEND loop, things are much simpler. Arno doesn't set or add to any variables, unless you give hi separate commands telling him to. He just keeps repeating th loop, and does nothing else. He stops repeating the loop whe the WHILE condition stops being true.

To sum up, FOR-NEXT loops are more complicated and do a lot more work for you. If you want a variable which increases (or decreases) by a fixed amount each time through the loop for use inside the loop, and if you want to stop after a fixed number of times or when the loop variable reaches some fixed value – it comes to the same thing – then FOR-NEXT is what you're after.

If you want more freedom, WHILE-WEND might well be what you need. You have to do more of the donkey work yourself, mind you. If you want a variable increasing by some fixed amount each time through the loop, you're going to have to fix it yourself. The 'b=b+5' in the new line 20 wasn't necessary in the old line 20, because FOR and STEP took care of that for you.

When you need to decide which type of loop to use, just ask yourself (a) do I need the loop variable? and (b) when do I want the loop to stop repeating?

NESTED LOOPS

So far we've only skimmed the surface of what loops can let us do. Our program draws a square 'falling' towards the bottom of the screen, but you could do much more complicated things with it if you wanted to. Using just one loop or even a series of loops one after another doesn't get at the real power of looping.

Before we get any further we'll have to get rid of that falling-square program. We'll need it later on though, so rather than typing NEW straight away we want to save it.

It's a good habit before saving anything to label it by tacking a few REM statements to the top of the program. Six months later with a heap of cassettes or disks to sort out, you'll be glad you did.

```
1 REM Falling squares
2 REM Absolute Beginners  AA Dec 86
```

Now if you've got a disk drive you've got things easy – just shove a formatted disk in the drive, type `SAVE "square"` (return), and after a few seconds of whirring you'll have your program safe and sound on your disk. (If you don't know how to format a disk, check out Matt's *Booting Up CP/M* for the details.)

If you've got a drive-less 464, just put a cassette in the data recorder and type `SAVE "square"` just as you would for saving a program to disk. Arnold will then tell you to 'Press REC and PLAY then any key'. Do just that, and he'll save your program for you. It'll take longer than a save to disk would, but for a program of this length it's probably worth the effort.

Now that you've saved the square-dropping program, type LIST. You'll find that the program is still quite unchanged. The SAVE command doesn't *move* the program onto your disk or cassette: it just makes a *copy* there, leaving the original intact in Arnold's memory.

Knowing that we've got a copy safe on cassette or disk, we can use NEW to get rid of the original. When you've done that, try typing in this listing:

```
10 FOR a=1 TO 10
20 PRINT " 5 times ";a;" makes ";5*a
30 NEXT a
```

This just prints out the five-times table – hardly exciting stuff, I'm sure you'll agree. Now, modify line 20 and add new lines 5 and 35, so the program ends up looking like this:

```
5 FOR b=1 TO 10
10 FOR a=1 TO 10
20 PRINT b;" times ";a;" makes ";b*a
30 NEXT a
35 NEXT b
```

Try to guess what this is going to do. Then run it, to see if you were right.

LOOPS WITHIN LOOPS

Now you know what the program does, but the question is why? Well, think about the loop formed by lines 5 and 35. This tells Arnold to repeat all the lines in between – lines 10 to 30, in other words – while stepping through values of 'b' from 1 to 10. We know what lines 10 to 30 used to do before we modified line 20: they just printed out the five-times table. The change to line 20 just means that they now print out the 'b'-times table, whatever 'b' is.

The first time through the 'FOR b=1 TO 10' loop, 'b' has the value 1 so lines 10 to 30 print out the one-times table. The next time they print out the two-times table, because 'b' is now equal to 2 – and so on until 'b' gets greater than 10 and the 'FOR b=1 TO 10 ... NEXT b' loop stops repeating.

Our program has two separate loops, one inside the other. There's a special term for loops like this: we say they're *nested*. The *outer* loop – the one that starts first and ends last, in this case the 'FOR b' loop made by lines 5 and 35 – simply tells Arnold to repeat the lines in between. These lines include loop commands that form an *inner* loop – the FOR and NEXT commands in lines 10 and 30, in the case of our program.

As you know, the 'FOR b=1 TO 10' makes Arnold run through the outer loop ten times. Each one of these ten times,he repeats the inner loop ten times. In other words the line inside the inner loop – line 20 – gets repeated 100 times. All that printing scrolls off the top of the screen pretty fast, but the program really does print 100 separate messages – take my word for it.

Let's try another program that makes this a bit clearer. NEW the times-table program and type this in instead:

```
10 PRINT "Line 10"
20 FOR a=1 TO 3
30 PRINT "Line 30:  a=";a
40 FOR b=1 TO 4
50 PRINT "Line 50:  a=";a;"    b=";b
60 NEXT b
70 PRINT "Line 70:  a=";a
80 NEXT a
90 PRINT "Line 90"
```

You should now be able to see the 'flow' of the program – the way Arnold repeats lines according to the loop commands – by looking at the messages he prints up when you run it.

GOOD AND BAD NESTING

Loop commands come in pairs. They tell Arnold to repeat all the lines between the start (FOR or WHILE) and the finish (NEXT or WEND) of the loop. If these repeated lines include the start and finish of another loop, that's okay – we just have a nested loop as above. But what happens if we have this second loop starting *in* the repeated lines and finishing *after* them?

Take a look at this listing and you'll see what I mean:

```
10 FOR a=1 TO 10
20 PRINT a
30 FOR b=1 TO 5
40 PRINT b
50 NEXT a
60 NEXT b
```

This is called *bad* or *improper* nesting, and Arnold can't cope with it. He's not the only one – I can't see what it's supposed to do either. This kind of thing happens only if you're careless. If you're nesting loops, make sure the inner one is completely inside the outer. That way you'll always be okay.

AND FINALLY ...

Nesting isn't just about putting FOR-NEXT loops one inside the other. You can nest WHILE-WEND loops, put FOR-NEXTs inside WHILE-WENDs or vice-versa.

Reload the 'falling square' program you saved earlier. If you're a disk user simply put the disk onto which you saved back into the drive, the same way up as before, and type `Load "square"`. The disk whill whirr, you'll get the 'Ready' prompt and, when you list it you'll find you've got the program back. Tape users will have to rewind the tape and then type `LOAD "square"`. Arnold will tell you 'Press PLAY and then any key.' Do this, and your program will load back in.

Now you can experiment with your program. Try putting an outer FOR-NEXT loop around it to make it fall repeatedly. You could even use the loop variable as a sideways coordinate, so that the square falls slightly further over each time.

BOOTING UP CP/M

Part 6

Matt Nicholson in previous issues got to grips with the intricacies of the CP/M operating system. Technical editor Richard Monteiro now takes over the series, with a closer look at some of the utility programs supplied with your system disk.

Some are so awful and user-hostile (come to that, not much use either) that we'll gladly pass them by.

More to PIP than meets the eye?

After reading through previous articles on Booting CP/M, you should be fairly happy with PIP and the various things it can do. One important point that has not been mentioned is the possiblility of having extra parameters following the PIP command. Well, as promised last month, here is a brief rundown on the more important of these parameters and their functions.

You'll remember that Pip uses the star as a 'wildcard' – so `*.com` means any filename with extension '.com' and `*.*` means any filename, any extension. To copy all the files from the disc in drive A to the disc in drive B you would type

```
PIP B:=A:*.*
```

which is very handy. However, using the extra or optional parameters available, even more control is available to you. For example, type `[V]` directly following, like this

```
PIP B:=A:*.*[V]
```

and all the copied files will be verified – the system will check that they have been copied correctly.

Other parameters include:

[C] Confirm (in CP/M version 3.1 only). This will display a message asking you for confirmation before copying each file – especially useful where you have given ambiguous filenames (for example *.*). You will be given the choice to copy or not to copy.

[E] Echo all transfers to the screen. Messages such as 'Writing to drive B:' appear to let you know what is happening.

[L] Lower-case only. This will convert all capital letters to lower-case.

[U] Upper-case. This has the opposite effect to [L], in that it converts all lower-case characters to upper-case – ie. capitals. (The terms come from the days when printers set type by hand and sorted individual metal or wooden letters into two cases, an upper and a lower.)

[H] Hexadecimal characters are assumed. All characters in the file are checked to be hexadecimal; an error message results if not.

[P*n*] Page length *n*. Formfeeds are inserted (a new page is started) after every *n* lines of text. The default is 60 – useful if copying to a printer.

[Q*string*↑Z] Quit. A file will be copied until the specified string of characters is encountered, and then closed with an end-of-file marker. For example [Qarea↑Z] will copy everything up to, but not including, the word 'area'. (Be sure to type ↑Z, which is CP/M's end-of-file marker, as Control-Z – not as the two separate characters arrow and Z.)

[R] Read system file(s). Sys files can be copied easily with this option. These files are hidden from the directory – see the August and September articles on STAT.

[Sstring↑Z] Start. A file will be copied from the first occurrence of the string, until the end of file. Thus, [Sknow↑Z] will start copying the file from 'know'. The string will be included in the copy unlike its counterpart [Qstring↑Z].

[V] Verify. As mentioned previously, this verifies the data between source and destination files, checking that a perfect copy was made.

[X] Copy. Non-Ascii files (for example, Basic and binary files) can be copied using this option.

Watch the syntax of these extra parameters. If using more than one of them, the correct form is:

```
PIP LST =DEMO.TXT[U P57 Qhello↑Z]
```

This command will send to the printer the file DEMO.TXT in upper-case, inserting a formfeed after every 57 lines and finishing on the word 'hello'. Don't worry if you have not quite got the hang of it. Trial-and-error is the best method of teaching yourself!

That ends the list of the more useful extended PIP parameters. As you can judge for yourself, PIP is a very versatile program. It may not be the most user-friendly, but then CP/M itself was never renowned for that!

Other programs on the system disk

The rest of Booting CP/M this month will be devoted to explaining how, why and when to use the numerous application programs on the system disk that came with your computer.

I'll tackle the simpler of these programs first and gradually climb the ladder, till the worst offenders have been properly dealt with.

Disccopy.com and friends

DISCCOPY, as the name implies, will let you copy disks – in CP/M, data or IBM formats. This is only useful for single-drive systems. If you have dual disk drives, you also have a program entitled COPYDISC. These files are available under version 2.2 of CP/M.

DISKIT3 is a useful file to have around with CP/M Plus instead of Disccopy and Copydisc. It allows copying of a complete disk and also caters for formatting disks in system, data or vendor format. (If you desire IBM format you will have to use FORMAT as found on version 2.2 system discs – more of that later.)

DISCKIT2 is another version available in CP/M 2.2, which works with only a single bank of 64k memory, as opposed to Disckit3's using both banks in the CPC 6128. Disckit2 is consequently slower.

If you need to verify that that one disk is identical to another, then use DISCCHK (for single-drive users) or CHKDISC (dual drives).

We come now to copying individual files. Users of two drives should use Pip (which has been dealt with in great depth). For those with a one-drive system, Pip will prompt you when to swap disks if you have CP/M Plus. The following utility is supplied for single-disk users with CP/M version 2.2:

FILECOPY will copy only files that have a R/W and DIR status (read-write and directory status are explained in previous articles). You type:

```
FILECOPY filename
```

You can copy more than one file if you use the '?' and '*' wildcards.

Copying cassettes to disk

Included on the system disk are a couple of programs called CLOAD and CSAVE. Cload reads a cassette file and writes it to disk. Csave

quite appropriately reads a file from disk and outputs it to cassette.

Cload needs two parameters, separated by spaces or comma:

```
CLOAD "cassettefile" diskfile
```

The cassette filename to read is enclosed in double quotes ("") – if a filename is not present, the first file on cassette will load. If a disk filename is not set, it will be saved to disk under the same name as that of the cassette filename. (This must be a maximum of 8 characters to be compatible with the CP/M operating system).

The programs transferred are saved as Ascii files, so don't expect them to work correctly without modification. Another point to beware is that protected files can not be transferred.

CSAVE is very similar to Cload, but there is a third optional parameter to deal with this time. The first two behave in precisely the same manner as Cload's. The third deals with cassette write speed: a '0' for 1000 baud and a '1' for 2000 baud – makes sense:

```
CSAVE diskfile, "cassettefile", writespeed
```

That ends the copying saga, and the various files that will do the job.

Formatting – as simple as 1, 2, 3

FORMAT, supplied on CP/M version 2.2 discs, has the ability to format a disk in any of four ways. These are System, Vendor, Data and IBM format.

To select a particular format, type a parameter after the Format command: S, V, D or I. For example

```
FORMAT D
```

causes a disk to be data-formatted. Just typing Format (and return) will use System format as default.

A system-formatted disk will have two reserved system tracks copied onto it. These contain part of the CP/M operating system.

DISKIT2 and 3 also have functions for formatting a disk, but make no provision for IBM format. All formats are selected from menus when using the DISKIT programs – very nice and simple!

To SETUP or not – is there a doubt?

The setup file allows users to configure disks to meet their particular basic requirements. These parameters or setup values are held on a special sector (configuration sector) on the system track.

A few of the items SETUP allows you to modify include the sign-on string, keyboard translations, drive characteristics and baud rates for the serial interface.

Typing `setup` will invoke several messages, most asking you whether to change an option or proceed to the next. Here is an outline of them:

Initial command buffer. You can store 128 characters of commands to be executed automatically. For example, if you want a directory of the disk every time you boot up CP/M, do this when asked to enter the 'new initial command buffer': type `dir↑M` and Enter. You should be familiar with DIR by now; the ↑M (Control-M, not two separate characters) stands for Enter or Return.

Using control codes, it is possible to change border, paper, ink, mode and window size among other things. It is even possible to have a program execute as soon as CP/M has been entered – try and figure that one out for yourself.

Sign-on string. This is a string of characters – up to 253 – that is output to the screen when CP/M is invoked.

If you enter 'Utilities disk 1986 – Jack Jones' as the sign-on string, exactly that will be printed every time you enter CP/M. Personalized discs – what more could you wish for!

Printer power-up string is very similar to the sign-on string. As the name implies, the message you type here will be sent to the printer each time you boot up. This could be a text message or, perhaps more usefully, a set of control codes to set up your printer.

I'm most thankful for the option **Keyboard translation table**, which lets me redefine the codes generated when I press certain keys. Each line in the table has four columns to fill in: key number, normal, shift and control.

Key number refers to the actual key to redefine. There should be a comprehensive list at the back of your *Amstrad User Instructions* – or it's handily printed on the 6128's case. The remaining three columns allow different values to be generated when a key is pressed on its own, with the Shift key or with Control.

A nice example would be to set up the cursor keys (which happen to have codes 8, 0, 2 and 1) so that application programs will recognize them. Here they are set for *WordStar*, which in its ordinary unfriendly way (considering the letters, 'unfriendly' may be the wrong word!) would expect you to use Control with the keys S, E, X and D – Ascii 19, 5, 24 and 4:

Key code	Normal	Shift	Control
8	19	1	141
0	5	18	142
2	24	3	143
1	4	6	144

If you wish to alter the keyboard translations, you are presented with a menu closely resembling the following:

A – Add key translation to table
D – Delete key translation
C – Clear translation table
F – Finish translation

To enter the first line that I gave as an example, you would type `A,8,19,1,141.`

■■■■■

We'll have to look at the remaining Setup questions in a future instalment. They are rather technical, and this month's space is full. To be safe, best to say no to the rest of the options.

However, before you go, look at the last two unanswered questions.

Do you want to update your system disk? (Y/N) I would suggest that you go through all the options a number of times – till you are confident of what you are changing and the effects they will have on your disk before answering yes to this question.

The final question asks whether or not you wish to **restart CP/M**. Well, it would be nice to see what you have done – because the whole purpose of Setup is to make life with disks more pleasant. ■



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THE FINEST FROM THE BES

Arnold moves up a grade

Last month we looked at Amstrad software meant to educate pre-schoolers. Now we move up to look at some of the packages available for older agegroups. The scene has improved a bit since our education feature last April.

CAESAR'S TRAVELS

Mirrorsoft, £8.95 cass, keyboard

Educational software for the Amstrad computer range is scarce, and what is available is very substandard. *Caesar's Travels* is one of those rare exceptions, being well packaged and presented – it looks and feels as professionally done as today's entertainment software.

Caesar's Travels comes in the form of a book written by James Mercer. Aimed at an age range of 3 to 9, it suits both pre-readers (obviously accompanied with an adult) and early readers. The computer cassette contains an abbreviated form of the story, but with the added advantage of animated action.



Poor old Caesar has been kicked out into the streets for not doing his job properly: catching mice. You take on the role of this miserable cat. Via the keyboard input that you supply, different outcomes to the story may occur. The idea is that you find a new home for yourself. Naturally you have many adventures along the way – it's not all a bed of catnips.

Only eight keys are involved. This is an excellent idea, as it will not confuse and thus put off any youngsters. The number keys from 1 to 6 are used to instruct Caesar to perform certain actions. For example, pressing 1 will cause Caesar to run and pressing 3 will make the cat jump.

Two other keys are Enter and the spacebar. Enter is needed when answering certain questions that crop up from time to time. For example, a number of objects may appear on the screen – in one case nine sausages appeared. You must count them up, then press the correct number key (9 in this case), followed by Enter. The spacebar is used to continue or start a new game.

To make things easier for a child, all the keys and their associated use are printed on a card which can easily be placed on the keyboard.

The game itself is very good, the text appearing at the top of the screen while Caesar cavorts amid relevant scenery at the bottom. Once you have instructed Caesar what course he should take, he carries out his actions graphically before the next section of text pops up.

Overall, this is an excellent way to introduce toddlers to reading. They can see their words enacted on screen, and we all know a picture is worth a thousand words. The text appears on screen line by line, at a pace a youngster can handle. Tunes are played at various stages in the game, adding to the atmosphere and overall enjoyment.

Mirrorsoft
Maxwell House, 74 Worship St, London. EC2A 2EN Phone: 01-377 4644

PLAY SCHOOL

School Software, £9.95 cass, £14.95 disk, keys

Play School, for the three-plus agegroup, consists with a selection of tiny games. Some are of educational use, others – well, they just pass the time of day.

When you first run the program, a few instructions appear on the screen, telling you which keys you can press, and what they do. Write them down or remember them, as no reference is made to the keys further on in the program.

You are then asked to press P to play the game. At this stage, pressing Shift-Q will set the level of difficulty. Alternatively, P will take you off to a party, where after several seconds gazing at a less-than-mouthwatering graphical cake, you are introduced to Superkid, the question master. He promptly asks for your name – you type in your name and press Enter.

On completion of all the introductory messages, you get a menu with six options. These range from simple addition problems to trying your hand at drawing. The first option is 'Counting'. A large box is drawn on screen and a number of objects appear inside. You must count them up and enter the correct number.

Superkid is watching you throughout your ordeal – his eyes occasionaly blink – but for the most part, he is cold and stony. He shows either displeasure (when answering wrong) in the form of turning his mouth down, or admiration (of correct answers) by grinning broadly.

You are given three chances to answer a question correctly. After a third failure the answer is displayed and the next question in a sequence of three is displayed. A correct answer merits a point in your favour; incorrect and it's face down.

After answering the three questions, either Whizkid will choose which set of questions you will try next or you will get to choose again (this seems to be at random).

Moving down the table of choices, we come to 'Find It'. A letter or number is displayed on the screen, and the child then has to search for it. This is a good way to teach children how to associate one thing with another.

The next option, 'Paint Box', is rather a limited drawing utility. Only one colour is allowed on screen (the child can choose this colour). Movement is via the cursor keys, so I'm afraid that you are restricted to straight lines (or crooked ones at least). It may hold children's interest for a while, but when they wish to improve on their designs, they will be stuck.

AGE 3-7

Item four is 'Match Up'. Six odd-looking patterns are drawn on the screen; a further one is drawn apart from the previous six. The child is to match the seventh object with one of the other six.

The next item is not one of the smoothest, fastest arcade-action games available on any home micro. You control a Pacman lookalike, whose sole task is to eat any stationary objects in its path.

The last but by no means least of these options is 'How Much'. This sets a fairly reasonable little addition test for your primary-school kid. A box with a number of items appears; you must type the correct number as with 'Counting'. Then another box is drawn with objects inside. Do the same action as before. Then you must add the objects from both boxes together and type this total.

On the whole, this is a well-presented package, with some nice touches, especially Superkid with his flicking eyelids and mouth movements. The options available will no doubt prove valuable teaching aids for the youngsters, and more importantly, keep them interested.

PHYSICS
School Software, £9.95 cass, £14.95 disk, keys

Physics, like its counterpart *Chemistry*, has one thing basically incorrect with the packaging, or rather the information displayed. It is not up to O-level standard. Maybe 12- to 14-year-olds will appreciate this but not 16-year-olds – that is, if they wish to pass. Apart from that, slightly more effort has gone into *Physics;* the questions are not as ambiguous, not quite as many spelling errors, and it actually accepts my answers (if they are correct, of course).

Physics has a nine-option menu to choose from. Each option has a notes section as with *Chemistry*. They are, however, slightly more substantial. If you don't wish to read the notes, you can go straight into the question section.

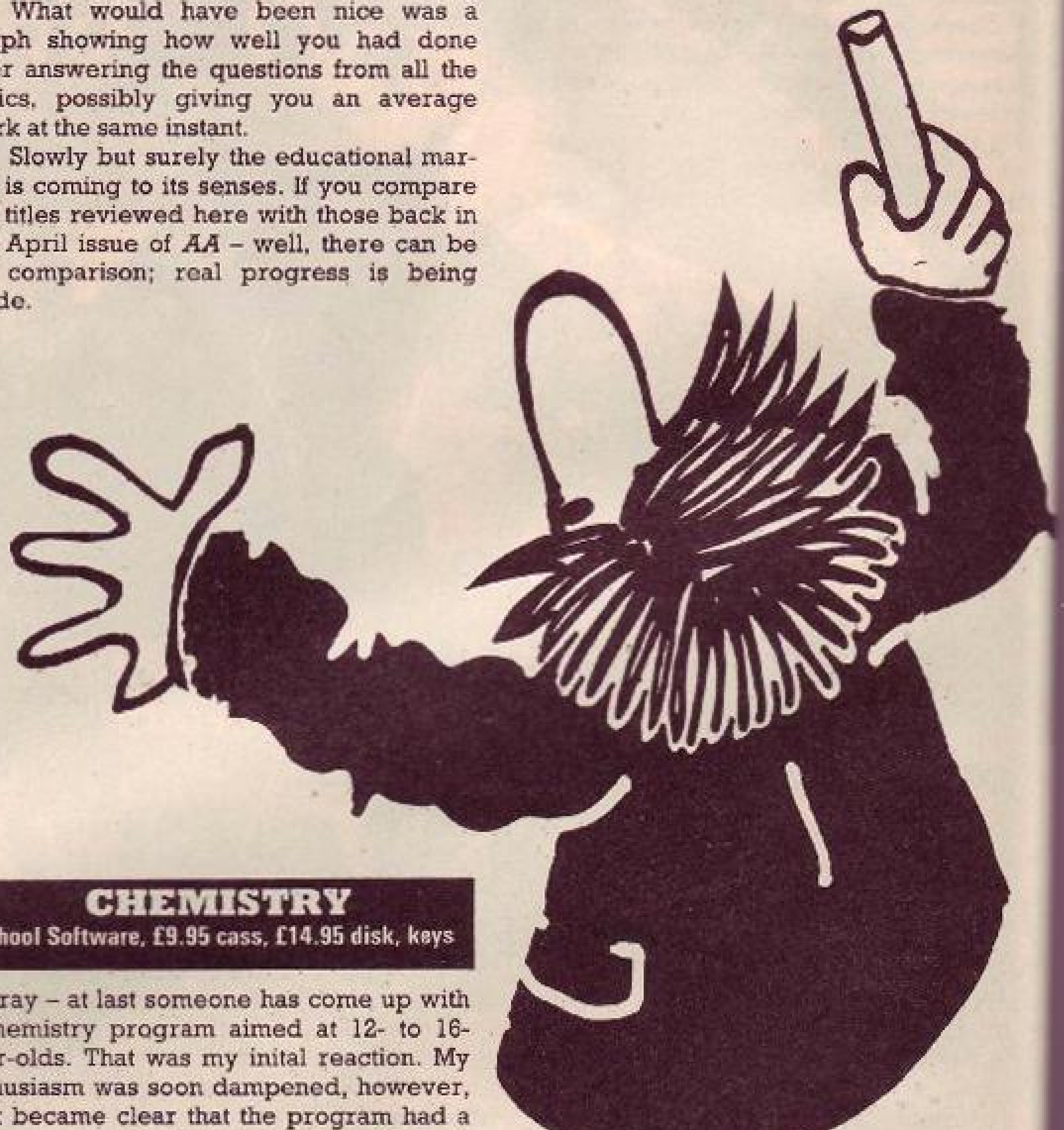
There is a nice suprise awaiting those that opt for one of the sets of questions. Included with many of the questions are small diagrams related to the subject – it makes all the difference. The style of answering and marking questions is identical to those from *Chemistry*.

AGE 12-16

Again, once all the questions have been answered, there is nothing more to be gained from the package. It would have been quite simple to include extra questions that could be loaded up whenever required. In that way, the user would aquire a much broader knowledge of the topic at hand.

What would have been nice was a graph showing how well you had done after answering the questions from all the topics, possibly giving you an average mark at the same instant.

Slowly but surely the educational market is coming to its senses. If you compare the titles reviewed here with those back in the April issue of *AA* – well, there can be no comparison; real progress is being made.



CHEMISTRY
School Software, £9.95 cass, £14.95 disk, keys

Hooray – at last someone has come up with a chemistry program aimed at 12- to 16-year-olds. That was my inital reaction. My enthusiasm was soon dampened, however, as it became clear that the program had a long way to go before reaching O-level standard.

On loading, you are presented with a menu offering a skeleton selection of the actual chemistry course. If the packaging had said 12- to 14-year-olds, I would have agreed, but there is no conceivable way that prospective O-level candidates can even consider passing with this. Apart from that, there is a very good idea here.

Selecting one of the topics gives you the choice to either read a few notes on the subject or alternatively jump straight into the questions.

The notes are short and sweet. They cover the questions you are about to answer but go no further. For that, you will have to consult the numerous textbooks.

The question section has a wonderfully executed area, but there are many spelling errors. On occasions my answers where rejected. I presumed either I had got them wrong or my spelling was incorrect. But then the program would spew out its version of the correct answer – exactly what I had typed in!

There are ten questions to each section; you are given two chances to answer each one. If you enter the incorrect answer first time, you are given a small clue (which is generally small enough to enable you to attain the answer). A correct answer earns you 10% – if on the second attempt you manage to get it right, you are awarded 5%. At the end of the 10 questions, your overall percentage mark is shown; depending on the mark achieved, you will get the message very good, good, or 'poor but will do better next time'. Obviously you'll do better next time – the questions remain the same.

This idea has the making of a good educational package. Unfortunately, on the Amstrad at least, this product is still in its early days; consequently it has several bugs, and could be further enhanced with more questions, a more comprehensive notes section and a general tidy-up. Still I mustn't complain too bitterly as there are so few of these educational programs around.

School Software Ltd
Meadowvale Estate, Raheen, Limerick, Ireland Phone: 010 353 61 27994

FABULOUS FIREBIRD

Firebird has grabbed the coveted Mastergame slot again with the superb game *Druid* on pages 58-59. It features some wonderful colour graphics and tough, addictive action.

There was stiff competition for the top spot this month. A host of Raves battled it out – the run-up to Christmas begins.

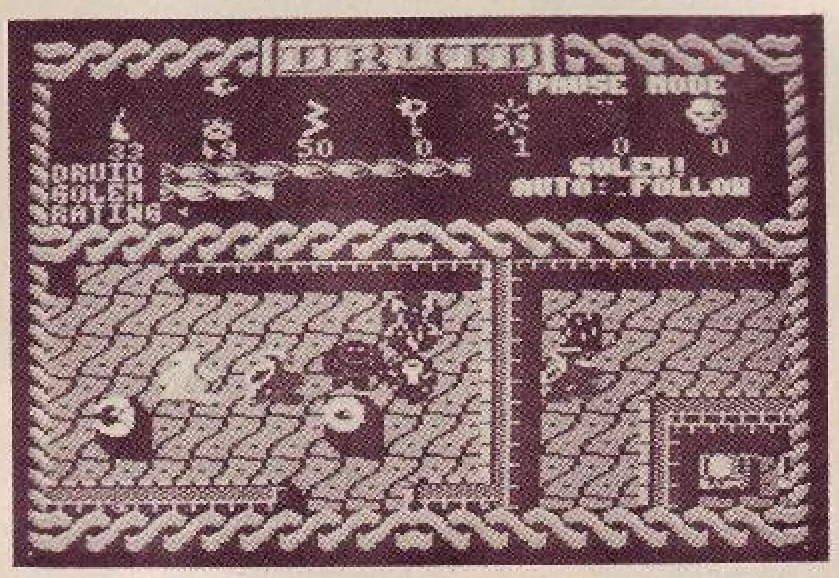
There's a cracking shoot-em-up, from Gargoyle's new label FTL, called *Lightforce* on pages 56-57, with great colour graphics, scrolling and fast action. The new Piranha label also has its first game out, *The Trap Door,* based on the children's TV series. You can see Berk and friends Raved on page 66.

Gremlin has earned yet another deserved Rave in *Trailblazer,* a 3D derivative of *Bounder* – it's great bouncing fun again on page 72. Mikro-Gen follows up its excellent arcade adventure *Equinox* with another graphically superb game *Frost Byte* – that's also on page 72. Mirrorsoft and Electric Dreams have also got in on the act with *Icon Jon* and *Prodigy,* a couple of arcade adventures to be found on pages 82 and 61 respectively.

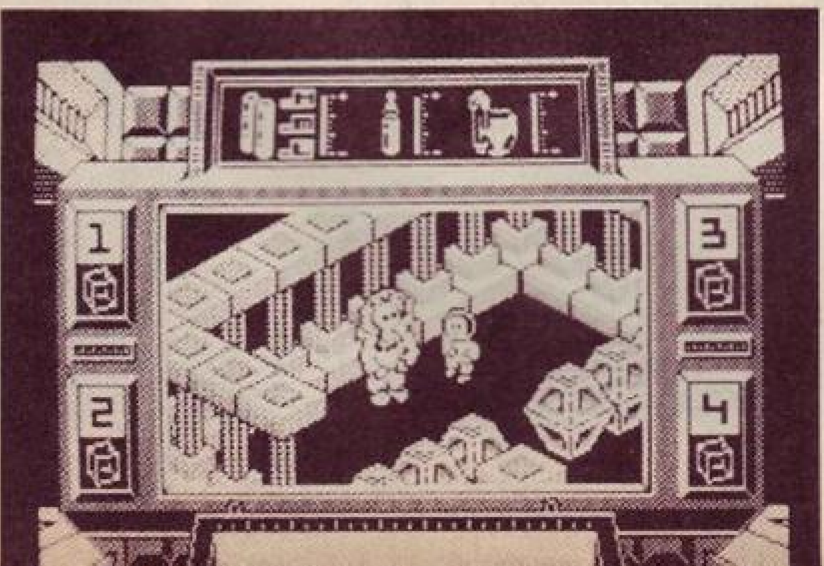
We've even got another Grave award to hand out, this time to the excruciatingly bad *It's a Knockout* from Ocean.

Lots of lovely stuff there to get stuck into, so go to it.

MASTERGAME



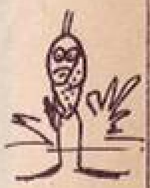
AA RAVES



ACTION TEST

OTHER GAMES TESTED

PREVIEWS





LIGHTFORCE

FTL/Gargoyle, £8.95 cass, joystick or keys

The new arcade label from Gargoyle, the masters of arcade adventures, has a lot to live up to. But if this first release is anything to go by, they look like succeeding.

It's a shoot-em-up based on many a popular arcade game like *Star Force* and *Xevious*, where you fly over a landscape that scrolls down the screen and have to blast both ground and aerial targets.

There are four zones that you have to get through, wiping out every alien you can on the way, which repeat once you've completed.

The zones vary in features and aliens, but all of them will give you a hard time and a weary firing finger. The four zones are the asteroid belt, jungle planet, orbiting zone, and ice planet.

Your craft appears at the base of the screen but can be freely moved around it, both up and down as well as left and right. You'll find that most of the time you'll want to stay at the bottom of the screen where it's safest and just move up to avoid some aliens. There are two general types of landscape that scroll beneath the ship: floating structures in space and planet surfaces.

Your ship fires twin shots that provide a good field of fire when you hammer away at the fire button. These deal with targets on the ground and other ships, but some cannot be destroyed at all and just have to be avoided.

SECOND OPINION

What can I say, the greatest shoot-em-up since sliced bread lies before me – I'm in heaven. Yes, you may have gathered, I have a slight bias for carrying out mindless tasks.

Light Force *is beautiful, the graphics, the scrolling (albeit a trifle slow – but who's complaining?), use of colour, blasting satisfaction, depth, alien variety and 'give me another go or I'll blast you' appeal. Thoroughly recommended!*

RpM

All of the graphics are superbly done. There's good scrolling, good use of colour, lots of variety and nice explosions.

The ships come in waves, while the ground features are in groups that usually contain a control centre. A bonus is given straightaway if you can destroy all the parts of a group, while another bonus is given at the end of a zone for all the waves you wipe out. The control centres are also important to dispose of because if you hit enough of them a bonus life is given at the end of the zone.

The ground targets all need two hits from your guns to destroy them while the other ships require either a single shot or can't be destroyed at all. That means you really have to work hard at the fire button to destroy groups, while the ships need faster reactions and more accuracy to deal with them.

The waves of ships are very varied in both appearance and behaviour, which means you need to become familiar with their patterns of attack. Some charge straight down the screen at you, others zig-zag or wheel across it, and some even home in on you.

Collision with anything sends you up in a puff of smoke and puts you back to just before the wave that you died on. You're not at risk just from collision: the ships can fire bullets and even missiles at you – also fatal.

GREEN SCREEN VIEW

Lost that one in the jungle scene, apart from that no serious worries.

RpM

Bonus lives can be gained by destroying some groups where one of the targets will hide a smiling face. If you reveal it by shooting the correct target, another life is added to your initial five. These bonus lives are very important and if you can get all of them it improves your scoring chances greatly. If you score highly enough you can get hold of a shield which can be used several times to destroy everything on screen. You probably won't get one of those until you've completed all four zones once.

For some people shoot-em-ups are dirty words these days, but this one really brings them back to life. It's colourful, fast, compulsive, varied and tough – in short all the qualities a good shoot-em-up needs. This one should keep you glued to the machine and strengthen your joystick hand and fire finger no end.

BW

FIRST-DAY TARGET SCORE
50,000

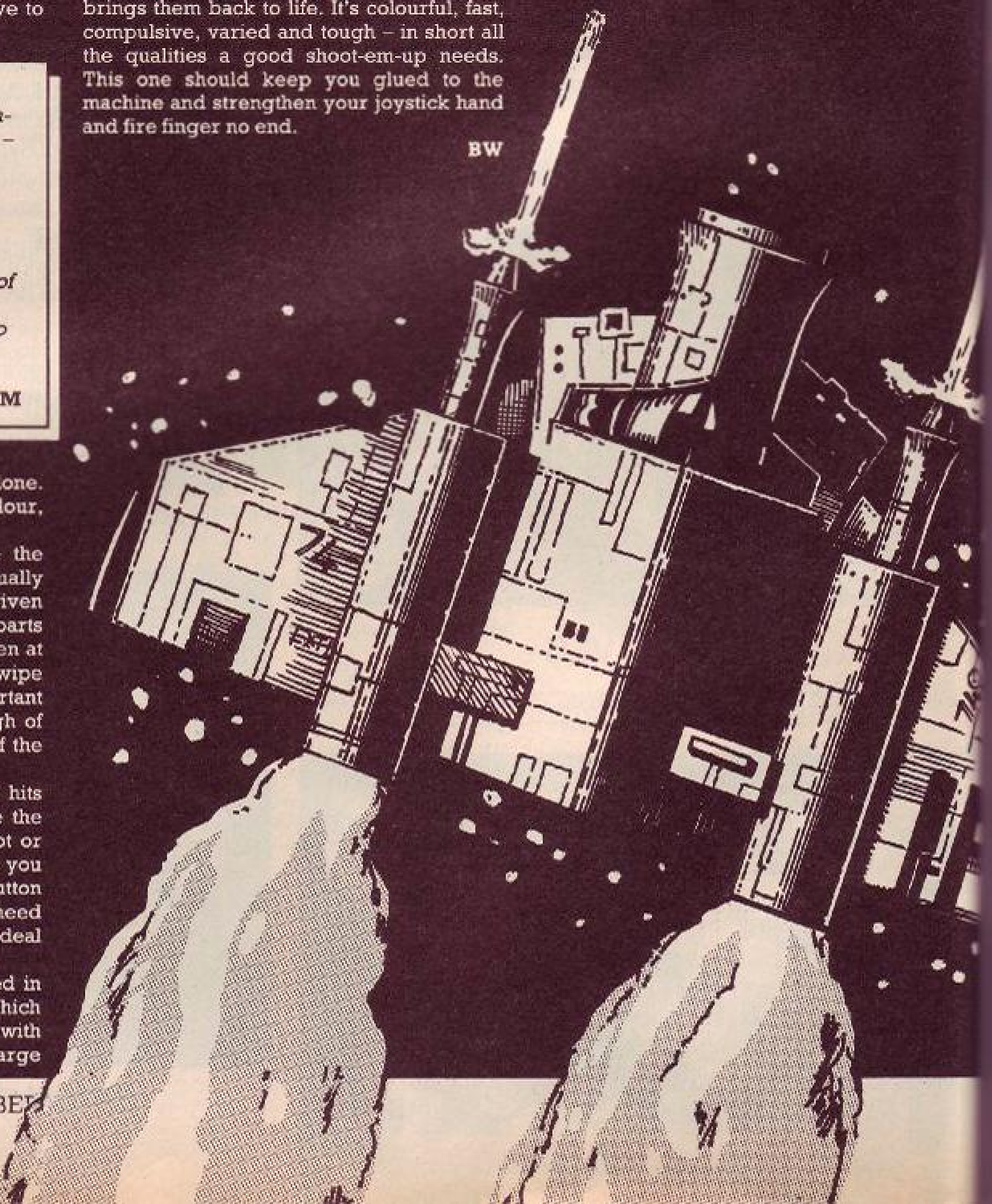
GOOD NEWS

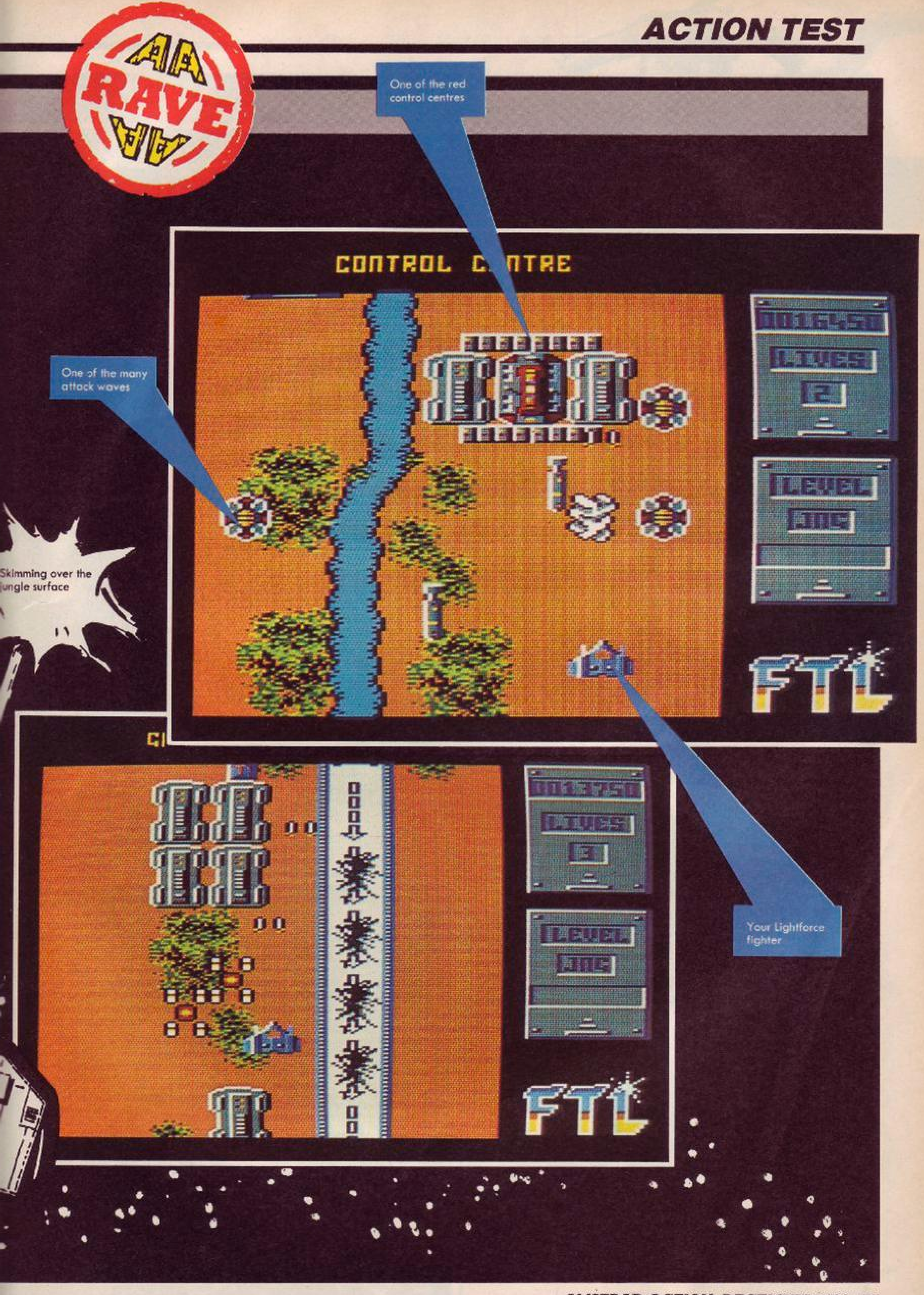
▶ Four very tough zones.
▶ Great graphics, scrolling and colour.
▶ Very varied aerial attack waves.
▶ Ground targets as well as air.
▶ Compulsive fast action.
▶ You can rest in between zones.

BAD NEWS

▶ Doesn't always respond well to the fire button.

GRAPHICS	90%
SONICS	42%
GRAB FACTOR	91%
STAYING POWER	89%
A A RATING	90%




RAVE
One of the red control centres
CONTROL CENTRE
One of the many attack waves
Skimming over the jungle surface
LIVES
LEVEL
FTL
Your Lightforce fighter



MASTERGAME

DRUID

Firebird, £7.95 cass, £12.95 disk, joystick or keys

The arcade game *Gauntlet* has already spawned one derivative on the Amstrad, *Storm*, and this is a second which really shows why the game was such a big hit in the arcades. It's an explore-and-shoot-em-up that takes place on eight floors of a tower, infested with nasty monsters and other surprises.

You take the part of the druid who is trying to destroy four skulls created by the Princes of Darkness. The skulls are located on the last four floors of the tower, so you'll have to battle through four floors before you reach the first skull. The floors are connected by stairwells. Usually there's only one connection between floors but some have several connections for otherwise inaccessible areas.

> **SECOND OPINION**
>
> *I see it. I hear it. I like it! Great for a quick blast, especially if you have a phobia against anything crawly – those beetles make great target practice.* Druid *is, however, much more than a shoot-out at the local druidary. It took me several attempts to rise from the social standing of 'Half-wit' – reason being I liked to see the abundant evil vanish in a puff of smoke!*
>
> *One thing that puts me off playing this type of games is the time spent loading. You can make a pot of tea, have a bath and take the dog for a walk. However this is a very minor point and does not detract from the exciting gameplay.*
>
> **RpM**

You have to fight your way past the hordes of attacking monsters and find a stairwell down to the next floor. On each floor there will also be a number of treasure chests that provide objects and powers that come in very handy. Each floor is a maze of corridors and rooms; you'll need to map out each one to make progress quicker in future games.

The screen is composed of a window in which you view the action and a status area where seven counters and three gauges keep track of your progress. Three of the counters show you how many missiles you have of water, fire and electricity. The four other counters show if you have any of four spells that create a key, invisibility, a Golem or 'chaos'. The gauges show the druid's strength, a Golem's strength and your rating in the game.

You can have up to 99 of the three types of missile and choose which one you want to shoot. Each type will kill a particular monster quickly but if you're using the wrong missile on a monster it may take two or three hits to kill it. The missiles and the other spells can be found in chests, but having taken something out of the chest it cannot be re-used.

The four spells are essential to your progress in the game: the keys unlock doors, invisibility freezes the monsters leaving you free to move, while 'chaos' destroys all monsters on screen and replenishes your energy.

The Golem spell is the most interesting. It creates a character who can be controlled by a second player or move automatically. He destroys monsters by walking into them and thereby protects you. He can be commanded to follow, wait or send, or be freely controlled by the second player.

Contact with any of the monsters will deplete your energy, as will touching some other static features like water and checkered squares. If energy reaches zero the game is over and the druid collapses in a heap of cloak.

The Golem is also drained by hitting monsters but when he dies you can always create another one. Your energy can be replenished by standing in the middle of pentagrams, but the difficulty is in finding them before your meagre resources run out.

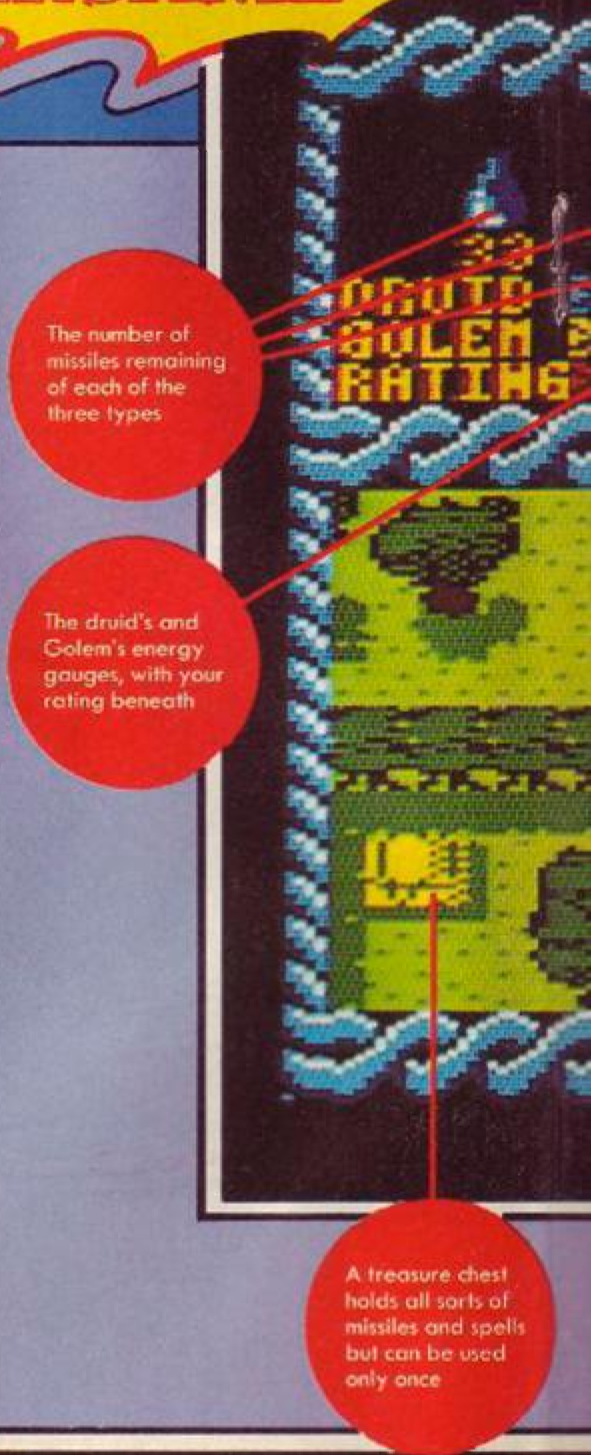
The graphics are excellent with a multi-directional scrolling window, well-drawn characters and landscapes, and great use of colour.

The gameplay is superb as well, having all the fast action and compulsiveness of a shoot-em-up, but also the tactical use of chests, weapons and Golem.

The variety of the graphics, monsters and mazes will keep you wanting to play, and the eight increasingly difficult floors will present an excellent challenge.

BW

FIRST-DAY TARGET SCORE
Seer







Chaos destroys all monsters, replenishes your energy and is used for destroying skulls

Golem is created by this spell

Invisibility freezes the monsters in their tracks

The trusty Golem who destroys monsters on contact and can be kept by your side or sent ahead

Keys unlock doors – lots are needed

The pentagram replenishes your limited energy supply

One of the many monsters: which missile gets rid of it most efficiently?

The druid, always centred by the scrolling window



One of the other floors in the game

G O O D   N E W S

- Good scrolling window.
- Eight floors of increasing difficulty.
- Great graphics and colour for the landscapes and characters.
- Good variety of features with different weapons, spells and objects.
- Action is fast, furious but tactical too.
- The Golem allows two to play.

B A D   N E W S

- Not true multi-player action of the arcade game.

GREEN SCREEN VIEW

As clear as the light of day – no trouble spotting those wandering wailers!

RpM

GRAPHICS	91%
SONICS	63%
GRAB FACTOR	93%
STAYING POWER	94%
A A RATING	93%

ALIENS

THE COMPUTER GAME



COMMODORE SCREEN

There are some places in the universe you don't go alone.

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ELECTRIC DREAMS SOFTWARE, 31 CARLTON CRESCENT, SOUTHAMPTON SO1 2EW. TEL (0703) 229694

Mail Order: Electric Dreams Software, 23 Pond Street, Hampstead, London NW3 2PN.

Electric Dreams
SOFTWARE

PRODIGY

Electric Dreams, £9.99 cass, £14.99 disk, joystick or keys

On a world run by machines there are just two humanoids, Solo the Syntleman and a baby called Nejo. You've got to help these two helpless characters escape from this world inhabited by the other mutated organic creations of Wardlock the machine sorcerer. The game certainly has an outstanding soundtrack, excellent graphics and an interesting playing area – but has it got any gameplay?

The aim of the game is to collect four security-system controls, one each from four main game zones. These zones are the ice, veggie, tech and fire, all of which have their own very distinctive scenery and characteristics. The screen shows the view of the 3D landscape in rather a small box in the middle of the screen, surrounded by mostly redundant panels. The screen scrolls in four diagonal directions as you move Solo, and Nejo can crawl after him as well if you let him.

There are gauges at the top of the screen for your oxygen supply, Nejo's food supply, and the state of his nappy. At the bottom of the screen is an area where you receive messages during the game. You're armed with a gun that shoots bubbles, which comes in handy for deterring the mutant organisms and performing some tasks.

The different forms of creature inhabit different zones. But all can deplete your energy if they touch you and can send you back to the starting point if you're weak enough. Shooting them just makes them run away for a while before they get their courage back.

Of great help while exploring are teleport terminals, but you'll soon find plenty of surprises: zones that aren't what they appear to be and floors that do funny things to your movement. Once you know your way around you've got to find out how to get more oxygen for yourself, food for Nejo, and how to clean his nappy as well.

SECOND OPINION

What head-bashing music when you first load it up – some of the sounds squeezed through Arnold's speakers are amazing. The graphics certainly match the music: scenery and characters are clear and detailed. It's hard; in fact you can wander around for ages without managing to accomplish anything.

Who cares about gameplay when the sound and graphics are this good!

RpM

The main aim is to find the security cubes. Once you've got them they have to be taken to the control centre and – then what?

The graphics are impressive, using colour and detail well, while the soundtrack is highly individual and great to listen to. The only question is over the gameplay: it consists mainly of wandering around just trying to find things. There's enough variety and complication to make it an absorbing game that should really challenge your mind and mettle.

BW

FIRST-DAY TARGET SCORE

Find a cube

GOOD NEWS

- **Excellent 3D graphics.**
- **Highly original and entertaining soundtrack.**
- **Nasty creatures that display intelligence and perseverance.**
- **Tough task requiring thought and a lot of exploring.**
- **Original features like the baby and misleading mazes.**

BAD NEWS

- **A small scrolling area.**
- **A lot of wandering around searching – can be wearing.**

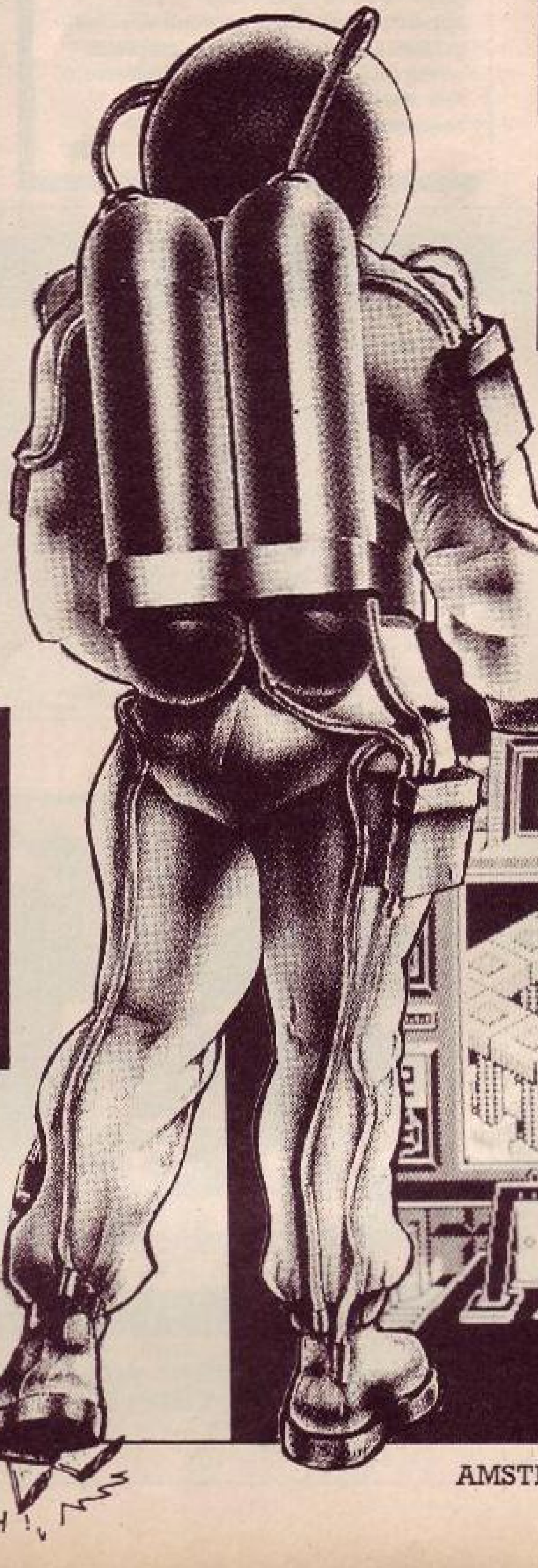
GREEN SCREEN VIEW

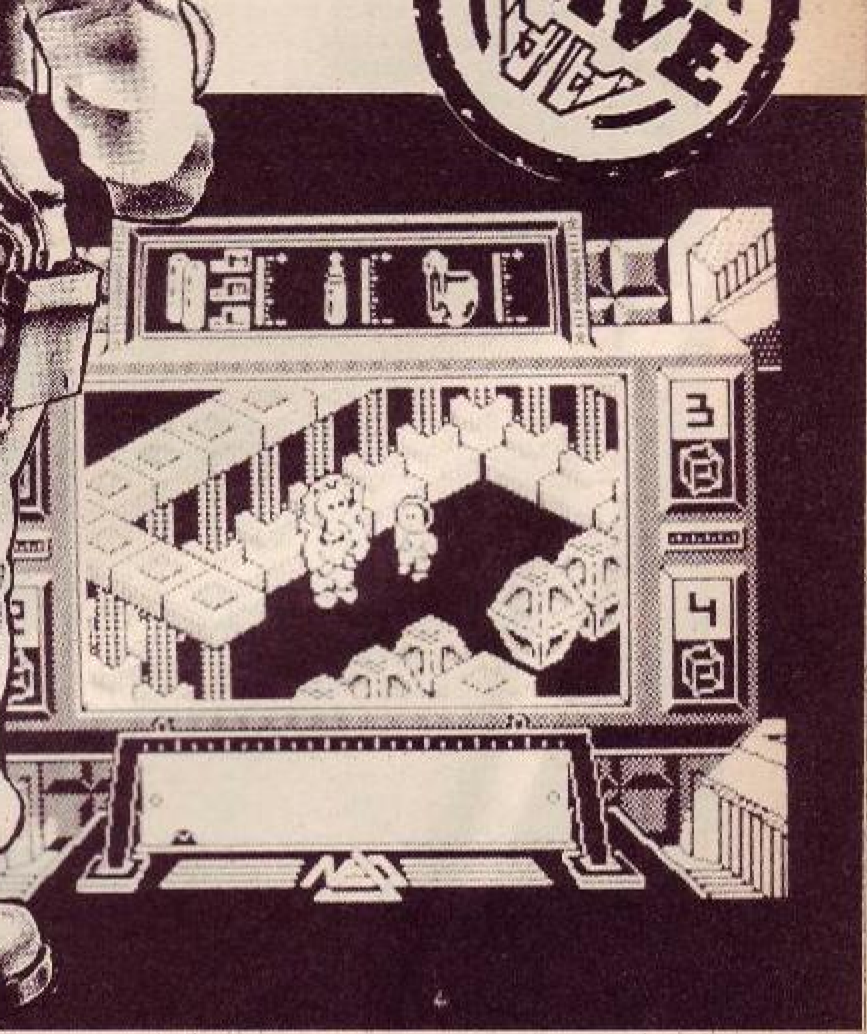
A colour toggle is incorporated so both green-screen viewers and colour owners are kept happy.

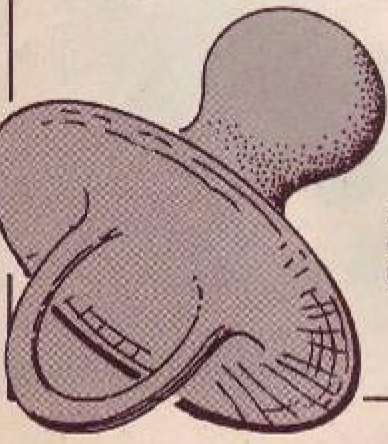
RpM

GRAPHICS	89%
SONICS	87%
GRAB FACTOR	83%
STAYING POWER	80%
A A RATING	81%

AA RAVE







Solo isn't solo anymore – he's got a baby

ACTIVATOR

Cascade Games, joystick or keys

Quite an unusual offering from Cascade, and probably the firm's best to date. You control a spaceship which roams the pest-infested corridors of Spaceport Antari. The object is to locate fuel rods and place them in a certain room, blasting any nasties that happen to enter your sights.

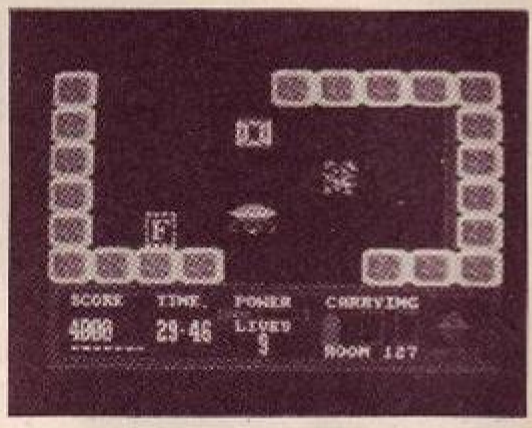
Starting from what is presumably your mothership, you hurtle along at a fair rate of knots (parsecs?) until entering the port of Antari. Once in, there is no way back until the task in hand has been completed. Immediately you are face-to-face with a less-than-friendly being. The first reaction is to stab at the Fire button. This will be to no avail, for you have to search for weapons. What a time to find out!



The graphics are large and reasonably detailed, with the surrounding corridors taking up some lively patterns – growing all the more strange the further you proceed through the game. While the initial tune will make you either retch or reach for the volume control, the laser and explosive sounds are very satisfying.

Once you have found your ammunition (this appears as a bullet standing on end), pressing Fire will pick it up. While in your possession it will give untold firepower. Blasting an alien or one of the strange-looking plants with waving tentacles will cause it to erupt into flames. There is one problem: if an alien is heading towards you and you manage to zap it, the debris continues on its original course. So if you stay in the way, be warned: your energy bar will soon be short.

During your travels on Antari, you will notice objects with letters inscribed on them. These, if you pick them up, allow you to pass through various sections and thus proceed further in the game. A maximum of three passes, which includes your ammunition, may be carried at one time. You need to select carefully lest you find yourself stuck.



You will also very occasionally encounter an item that defeats description. This is most likely to be one of the fuel rods. Just pick it up and take it to the special room with ... call them seven odd-looking stools. Flying over these will cause the rod to leave your grasp and position itself onto one of these stools.

The playing area is quite surprisingly large, and the number of aliens (Antarians-?) will keep the most trigger-happy freak in heaven. To start with, you are given nine lives, which may seem rather an excess, but boy do you need them – bumping into an alien or plant will cause serious damage

SECOND OPINION

With well over 150 rooms to explore and some fast shoot-em-up action, you would think this would be an excellent game. It lacks something – lasting appeal or rather the give-me-another-go feel. It has some decent graphics, with good explosive noise. Apart from that, there is not much for me to recommend.

BW

TRIVIAL PURSUIT

Domark, £14.95, joystick or keys

This is the official version of that most irrelevant of board games. It seeks to recreate the game, throwing in a few extras that a computer can provide. Just in case you've been in a Tibetan monastery for the last few years I'll give a brief description of what the game's about.

It's all based on questions of no importance whatsoever, except that knowing the answers helps you win the game.

You play on a board where a ring of squares is joined to a central hub by six spokes. The squares are different colours, representing six question categories and 'throw again' squares. You have to land on the six squares where the spokes meet the ring and answer a question correctly. Having got all six you can go to the hub and answer another question to win the game.

At the start of a your turn you throw the dice (random choice of number by the computer) and can move that number of squares in any direction, trying to get onto one of the spoke-ends. Land on a subject square and you have to answer a question on it; get it right, you can throw again and continue your turn; wrong and play passes to the next player.

The computer version of the game is essentially the same as the board game, but Arnold does all the hard work for you – and adds a few new touches to the questions. When a question is asked the screen changes to a cosy fireside scene where the question can take the form of music, a diagram, picture or just text. You can alter the time allowed for answering, from five seconds to limitless.

Once the answer is revealed you're asked if you got it right or wrong. Obviously this means you have to announce your answer out loud. It leaves a one-player game open to some terrible temptations to cheat.

Another enhancement of the game made possible by the computer is that for each player a chart is kept recording his knowledge of each category. This isn't just of statistical interest. It comes into play at the end of the game when a player lands on the hub and has to answer a question on a category chosen by the other players. They can study his score chart and pick his worst subject.

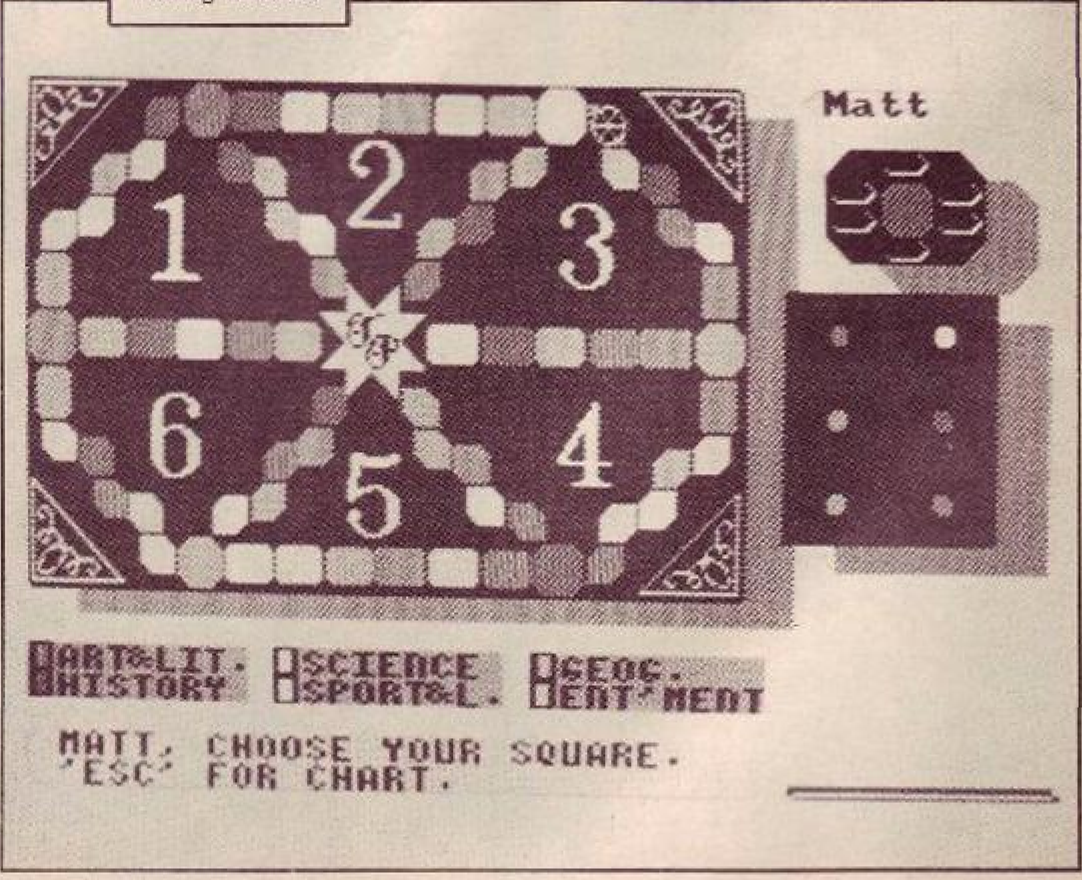
Anther option lets you turn on and off a little character called TP who presents the questions. You can also add, remove or pause any player in the middle of a game

GREEN SCREEN VIEW

Q: Which of the six board colours would you say comes out best? Still playable.

AW

The main screen showing the board



to your livelihood.

This may all seem more than enough to be getting on with. Unfortunately those kind people at Cascade have included a countdown timer: only 30 minutes to complete the task, otherwise ... well, you know.

Initially, there is a lot to do, what with fighting off the aliens and picking up passes. However you soon tire of the repetitious gameplay. The only thing keeping you going is the thought, 'Where on Antari is that last rod?'.

It's certainly tough, but once you recognize the playing area, you will probably move on to something more demanding.

RpM

FIRST-DAY TARGET SCORE
7,000

GREEN SCREEN VIEW
Everything is exceptionally clear – someone has got it right at last.
RpM

G O O D N E W S

- **Good blasting appeal.**
- **Large game area.**
- **Satisfying explosions.**
- **Colourful.**

while the others carry on as normal.

The questions are varied and truly trivial. But after you play several times you'll notice the same old ones coming back. To combat that there are 16 other question files available, so it's probably best to use those in some order of rotation.

As a multi-player game it's as good as the board game and makes use of both sound and graphics capabilities.

However the basic aim is still just about to answer trivial questions, whereas *Powerplay* (reviewed last month) takes the trivia theme and adds a more absorbing game to it. If you've never played Trivial Pursuit then take a look. But if you've got the board game it's not really worth getting this as well.

BW

G O O D N E W S

- **Replicates the board game very well.**
- **Adds graphical and sound questions.**
- **A good multi-player game.**
- **Lots of question files available.**

B A D N E W S

- **All seems very old-hat these days.**
- **Not worth buying if you've got the board game.**

GRAPHICS	62%
SONICS	58%
GRAB FACTOR	68%
STAYING POWER	69%
A A RATING	68%

B A D N E W S

- **Terrible tune.**
- **Can become repetitious.**
- **You won't go back for more.**

GRAPHICS	69%
SONICS	35%
GRAB FACTOR	71%
STAYING POWER	30%
A A RATING	65%

VIRGIN ATLANTIC CHALLENGE GAME

Virgin, £8.95 cass, joystick or keys

Remember Richard Branson's toy boat that he whizzed across the Atlantic in record time? Well, it won't come as any surprise that it's popped up as a computer game, probably to help pay back the cost of the boat. The game makes Richard the sole crew member; you have to control him to get the boat across the pond.

You must do the jobs of the whole crew on the voyage: check the radar, stay on course, avoid hazards, keep the engine running, run your business using the telex, set the speed, and feed yourself. All the areas of the boat are shown on just two screens. You get at each piece of equipment by standing in front of it and pressing the Fire button.

You have to follow a planned route across the sea in order to rendezvous with fuel tankers which refuel your boat to keep it going. In order to keep to this route you – in the cockpit – must steer along the bearing you're given by the radar screen. You also have to steer around icebergs and fishing boats that are constantly getting in your way.

SECOND OPINION

What's happened to my crew? Probably fed up with the whole idea, leaving me to control rudder, maintain the engine room and a whole fleet of mundane tasks. On-screen action is about as exciting as a bad day's fishing – in short not very.

It's all too easy to die: while carrying out maintenance on the engine, you will undoubtedly strike an iceberg; or you will be avoiding the iceberg, only to find the engine overheats and bang, you sink!

If you have seen all the action on the television or read about it in the papers, leave this program alone and try your hand at fishing.

RpM

While you're busy zigzagging across the ocean the engine temperature and stress will be building up. If you let them rise too far the boat will break up. You'll either have to keep going at a steady pace or give them time to rest occasionally.

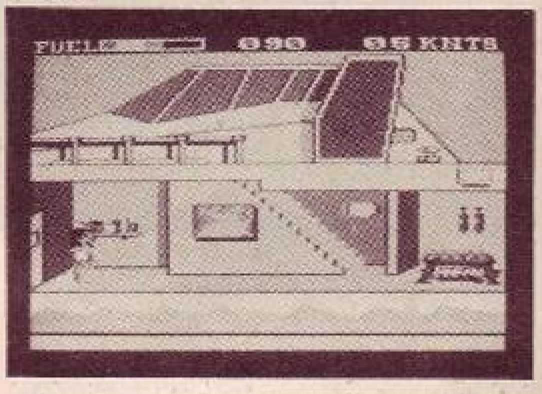
You have to look after your health and the business as well on this trip, using the galley and a telex machine. At the galley you are gradually stoked up with food, allowing you to move faster around the boat. The telex will ask you a question about the business: you must answer yes or no. Get the question right and you could make some money, wrong and you'll lose a packet.

Most of your time is spent racing from one part of the ship to another as the computer informs you of each alert. This gets repetitive after a while, and most annoying when one slight delay can sink the boat and end your game. There's quite a long-term challenge in completing the route at all, never mind in record time, so that should keep you plugging away.

On the whole I think the game consists mostly of hype and publicity, but the tough task redeems it somewhat.

BW

Richard Branson on his floating record-breaker



GREEN SCREEN VIEW
It looks all sea-green to me.
RpM

FIRST-DAY TARGET SCORE
20%

G O O D N E W S

- **You're constantly on the go, getting between locations.**
- **It's very tough to complete.**

B A D N E W S

- **Actions get very repetitive.**
- **Too easy to die without much notice.**
- **There's never much activity on screen.**
- **Not as exciting as the real thing.**

GRAPHICS	32%
SONICS	28%
GRAB FACTOR	54%
STAYING POWER	47%
A A RATING	50%

BEACH-HEAD II

US Gold, £9.95 cass, £14.95 disk, joystick or keys

This sequel has been a long time in the making. At last you've got the chance to get to grips with the dictator who apparently escaped at the end of the original game. He's now constructed himself an island

fortress which the allied forces are trying to capture, while the dictator tries to inflict revenge for his earlier defeat.

You can play either the dictator or the allied commander, or go head-to-head with another player, in the four-stage battle for supremacy. In the first stage the allied paratroopers parachute in and attack a machinegun nest, next they use the gun to help hostages trying to escape the dictator. Any rescued hostages are put in helicopters and flown through heavy defences. The final confrontation is between the dictator and allied leader throwing 'poonta' sticks at each other across a river.

SECOND OPINION

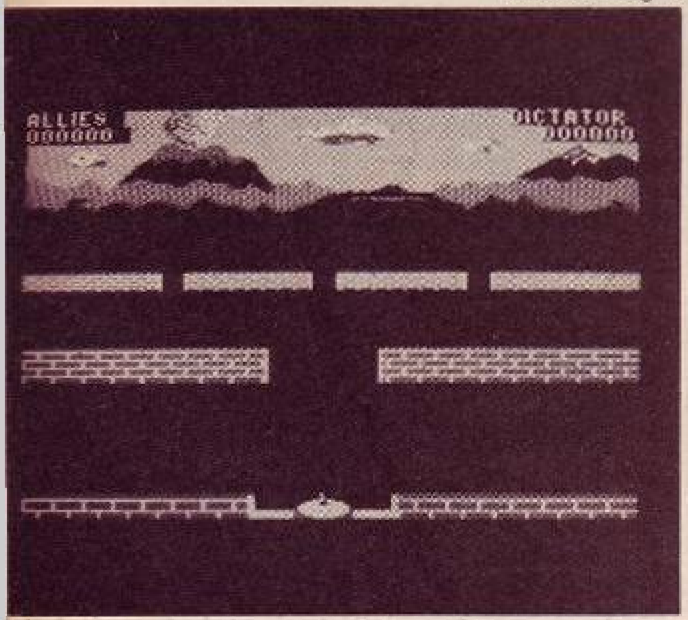
What a lot of rubbish! How can US Gold dare to put out muck on the market? The program is riddled with bugs. You fall asleep flying your chopper. Hold down the spacebar (or fire button) at certain points of the game and amass a great score. Best thing is to stickytape it and watch. In fact, this is probably the most exciting feature of the game: seeing your score reach undreamed-of heights.

RpM

In one-player mode you can play either the allied commander or the dictator, against the computer. In the first scene the allied player controls a chopper at the top of the screen that drops parachutists behind four walls running horizontally across the screen. The dictator controls a machinegun with which he tries to pick off the soldiers. Once all the soldiers have landed they can advance to a wall nearer the gun and then over or around it to the bottom of the screen and past the gun. All the time they'll be under heavy fire, but can reply by throwing grenades at the gun for bonus points.

Having overrun the gun, the allies can turn it on the dictator and try to help some hostages escape. They appear in the top left of the screen and walk automatically across to a doorway. The dictator tries to stop them by using several means which the allies try to counter with the gun. One soldier ties to drop rocks on the escaper, another lays mines for him to run into, while a tank trundles towards him trying to crush

The screen where the assault begins



GREEN SCREEN VIEW

Unfortunately too much is visible.

RpM

him. If at least one hostage gets through, it's on to the next stage.

This is a helicopter flight over a downward-scrolling landscape which the allies have to complete with the hostages as passengers. The dictator controls tanks along the route that can bring the chopper down, while other defences work automatically. The chopper can shoot many of the defences and fly under and over obstacles.

The final stage has two figures standing on opposite sides of an underground river where they throw sticks to try to hit each other. Four hits wins a round, causing the man to fall in the water. There are nine rounds to complete, a bonus being awarded for scoring 4-0 victories.

The stages all sound fine in concept but they are actually very boring to play. For one, three and four there are simple methods for completing them without any difficulty whatsoever, while number two is a lot tougher. The computer puts up rather pitiful opposition; even a two-player game is limited by the game's shortcomings, particularly on stage two where the dictator can win every time without fail. This is a bad conversion made up of simple graphics, horrible sound and boring gameplay.

BW

GOOD NEWS

- **Two-player option may produce some fun.**
- **There's some variety in what you have to do in each stage.**

BAD NEWS

- **Unimpressive graphics.**
- **Very nasty sound.**
- **Boring, simple gameplay on all stages.**
- **Stages two and three are very slow.**

GRAPHICS	48%
SONICS	18%
GRAB FACTOR	44%
STAYING POWER	38%
A A RATING	42%

VIDEO POKER

Mastertronic, £1.99 cass, keys only

In Las Vegas there is a machine, much like a slot-machine, that plays poker with you. This is a silicon-chip version of it that will probably cost you a lot less than throwing cash in the casino. You are given 20 coins with which to bet: nickels, dimes, quarters or dollars. A hand of five cards is dealt to you. Before looking at it you have to bet up to ten of your coins. The hand is then revealed and you have to decide which cards to hold and which to discard.

Discards will be replaced by new ones, which will turn over to reveal your final hand. You're trying to get a winning hand. Most winning combinations conform to the usual rules of poker and each one has odds placed on it. For instance the odds on getting a flush are 5 to 1, so if you get that hand you'll get back five times your stake money.

SECOND OPINION

Zzzzz. Oh do excuse me; I was just catching 40 winks while my cards were being dealt. This could have been a half-decent game, but unfortunately it falls down on speed – or lack of it.

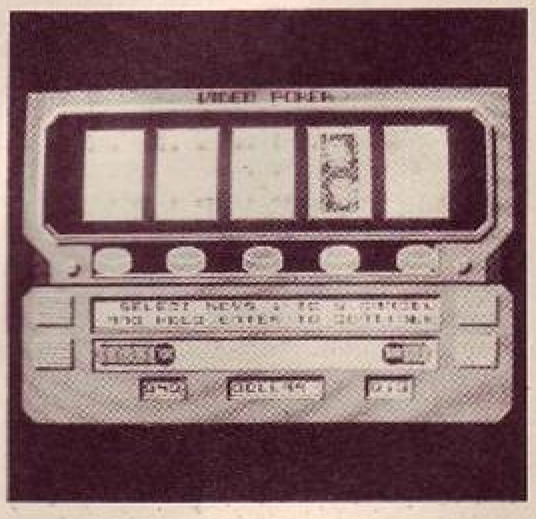
Nice graphics, awful sound and gameplay. Someone at Mastertronic obviously hasn't heard of the CPC's three-channel sound chip; come to that, they can't be aware that Arnold's internals are running at approximately 3.7 MHz.

RpM

The least valuable winning hand you can have is a pair of jacks or better, which just gets you your stake money back. The most valuable hand is a royal flush, for which the odds are 250 to 1 – a bit stingy if you ask me.

If you haven't got a poker game it might be interesting, but without the competitive edge of an opponent I found it very dull and rather slow.

BW



GREEN SCREEN VIEW

At least some of it dosen't show up!

RpM

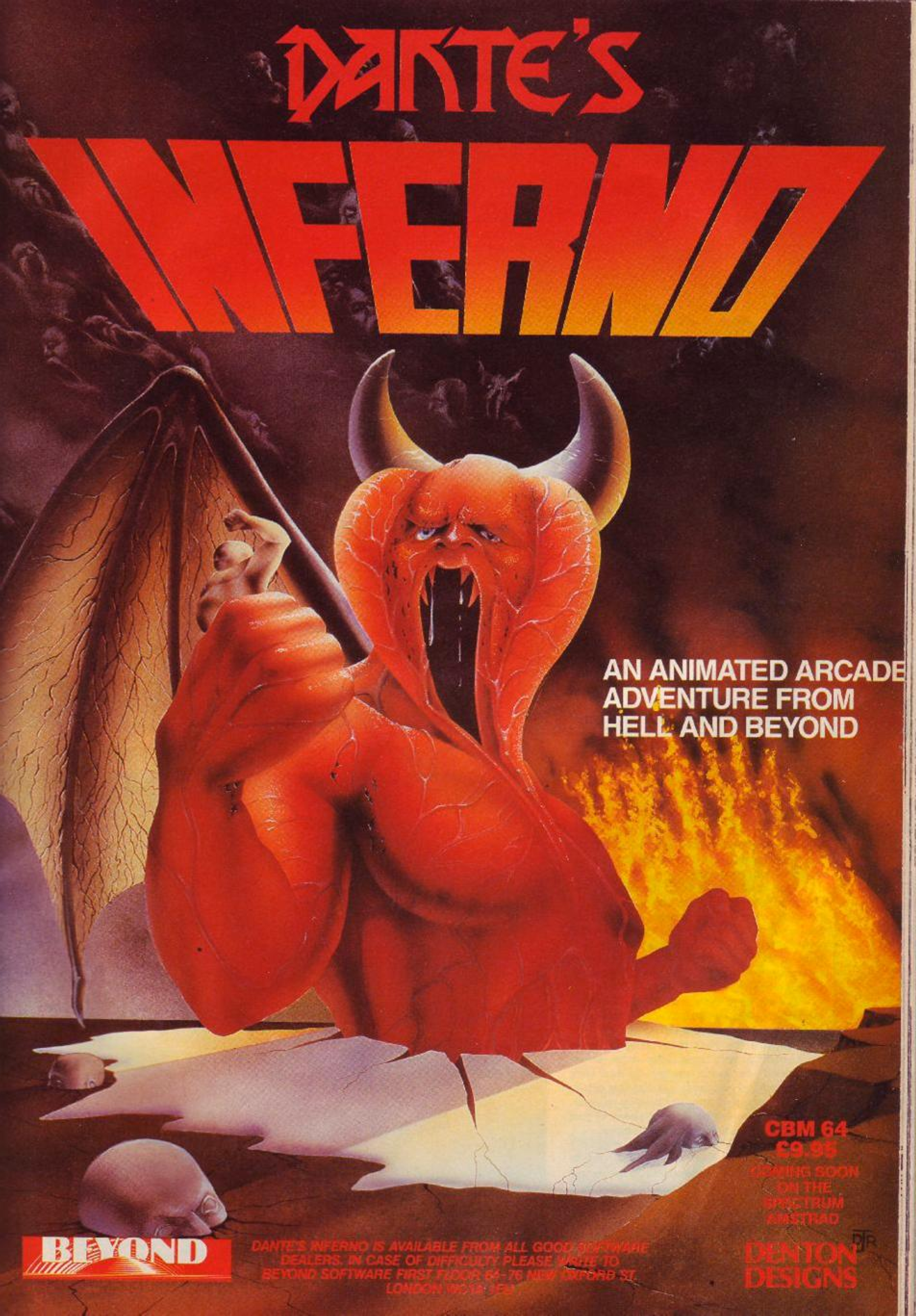
GOOD NEWS

- **Cards turn nicely.**

BAD NEWS

- **The game is slow.**
- **Little to do, requiring little skill.**
- **No variety to the game.**
- **No competitive edge to it.**

GRAPHICS	40%
SONICS	17%
GRAB FACTOR	21%
STAYING POWER	17%
A A RATING	21%


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DENTON DESIGNS

THE TRAPDOOR

Piranha, £7.95 cass, joystick or keys



A big, blue, bumbling Berk

Based around the new children's show of the same name this game shouldn't be written off as just for kids: it's got a lot more to offer. Besides the cute graphics, humour and good animation, there are some interesting tasks to complete. You won't master them easily.

The game concerns the attempts of a hapless Berk to please the Bad-Tempered Thing – upstairs, never seen – that orders him to do various tasks. Berk inhabits the lower floors of a dingy castle and has to deliver objects to the BTT using a dumbwaiter lift. Berk himself is a large, blue, cute-looking cookie monster shambling around the screen at precisely the speed befitting a fat lump like him.

There are two types of Berks: Learners and Supers. The Learners have to complete four tasks; the Superberk has to do five and also cope with some additional hazards.

SECOND OPINION

Oh wow! That was my initial reaction on seeing such a lovely, large yet detailed Berk wandering around an over-infested castle. His hand and mouth movements are so fantasticaly realistic – almost better than watching the TV cartoon.

RpM

The things poor Berk has to send to 'Im Upstairs aren't very pleasant: eyeball crush, boiled slimies and a can of worms, for instance. It's a dirty job, but somebody's got to do it. Each task requires you to solve a puzzle by using various pieces of equipment and, most difficultly, a creature from out of the trapdoor.

The trapdoor is in the floor of Berk's starting room. When he flicks the lever to open it, out comes a creature. One of them is essential to the completion of a task but the others just have to be got rid of again. They each perform an action that you'll need and although it may not be immediately apparent what it is, you'll appreciate their animation and humour.

Berk is wonderfully animated as he waddles around the castle – one long wrap-around corridor with a single cellar room below. The corridor has several staircases that Berk can climb to reach balconies and walkways. The playing area isn't very large; even so, there's quite a lot of hard work to do to crack the game. The castle itself is quite dull but the creatures within it are most entertaining.

Berk can pick up many objects, most of them

containers, and tip the contents from one to another. Some objects are too large to carry and have to be pushed around to get them into position. You'll have to be quite imaginative in your use of them. Just to illustrate why, here's an example of one of the tasks.

The BTT has asked for fried eggs so logically enough, Berk needs to get a bird out from the trapdoor. Once out, it flaps around doing nothing in particular, so how does Berk get some eggs from it? Well, not to put too fine a point on it, he needs to give it a bit of a surprise from beneath – catapult something into it. I won't tell you any more except that when Berk succeeds, the look on the bird's face is hilarious.

Each task has to be completed within a time limit or poor Berk will catch hell from you-know-who.

Throughout the game a little yellow spider hops (?) around making a nuisance of himself. A skull can come in handy for giving advice on what to do. Another problem is getting rid of an unwanted creature

GREEN SCREEN VIEW

Everything except Berk is clearly visible. This is a crying shame as you will miss out on some marvellous animation – Berk's facial movements are priceless!

RpM

KETTLE

Alligata, £8.95 cass, £14.95 disk, joystick or keys



A two-player game with both kettles in action

It's hard to find words to describe this game because it's packed with originality and is *very* odd. The kettle of the title is what you control. It flies and has to be got out of an underground cave system – what could be more natural?

The most interesting feature of the game is that two players can play simultaneously, viewing the action on separate halves of a split screen. You can compete with each other to get through the game or help each other out if you want to. In the one-player mode the second window disappears.

In each cave system there are 'bowels' which look like leather bottles and spew out blue bubbles from their open tops. The bubbles are the your main danger: when they collide with you they take large chunks off your kettle energy. To deal with them you have a 'crizza', a bullet that orbits the kettle and destroys bubbles on contact. The crizza can also be sent out ahead of you to keep the bubbles from getting close.

The crizza is also used to destroy the bowels by hitting them ten times to leave a diamond. Hit the diamond while the crizza is in orbit to reveal either a tin-opener (I said this game is odd), alien, bonus points or a jug of water. The tin-opener is what you need to get through to the next level: it



AA RAVE

or a ghost that came through the trapdoor when you didn't want it.

Children will certainly appreciate the graphics, humour and tasks, which correspond closely with the TV show. The tasks will be a bit beyond younger children – but most parents will enjoy playing the game with them. *Trapdoor* should appeal to all ages, although hardened gamesplayers will probably manage to crack it quite quickly – still great fun while you're trying.

BW



Berk encounters a leaping, boggle-eyed thing-a-me-whatsit

FIRST-DAY TARGET SCORE
2,000

GOOD NEWS

- **Large, well-animated characters.**
- **Bags of humour.**
- **Imaginative tasks which range from very simple to quite complicated.**
- **Appeals to all age-groups.**
- **Corresponds closely with the TV series.**

BAD NEWS

- **Won't keep experienced gamesplayers going for long.**

GRAPHICS	88%
SONICS	73%
GRAB FACTOR	92%
STAYING POWER	84%
A A RATING	87%

SECOND OPINION

Love the sound – very noisy – up to the usual Alligata standard! It's a very origional idea which unfortunately falls down on the gameplay. The tasks seem rather repetitive, with the scenery changing only slightly as you proceed to deeper levels. In short, this game leaves me cold: I keep expecting something more exciting to happen – perhaps one day?

RpM

opens the lid of a connecting pipe when you approach it. The alien drains energy and has to be shot. The jug of water replenishes your energy.

The cave systems get gradually more complicated and difficult, putting you increasingly at risk from banging into the walls – another way to lose energy. Fortunately you can restart a game at the highest level you reached when you die so you don't continually have to replay the easier starting levels.

The game has many options besides the two-player one that put a bit of variety into the action. The crizza can be made to proceed or retreat, which means it will either stay out ahead of you when fired or return to orbit as soon as it hits something.

GREEN SCREEN VIEW

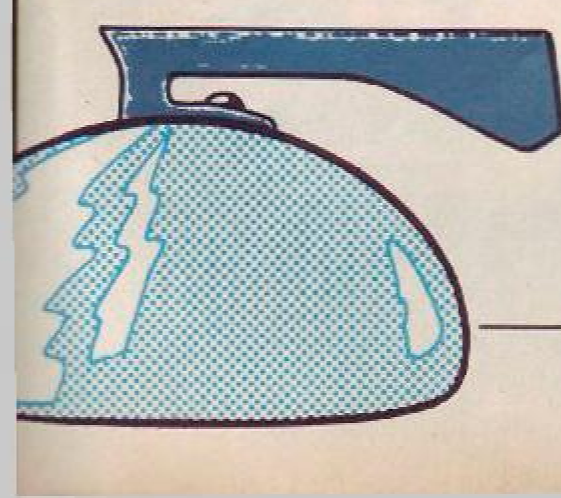
Very clear – no trouble seeing any feature.

RpM

In one-player mode you can also choose to have the second kettle as a kind of shadow that follows you everywhere and thereby helps protect you with its crizza. There's also a 'flash' command which in two-player mode flashes the bubbles to speed up the action.

There's lots of originality, intriguing options and tough levels to cope with that make the game very interesting. However the actual gameplay of flying around the cave systems destroying bowels will get a little repetitive. The scrolling two-player windows are excellent though, and people who enjoy a two-player challenge should find plenty of enjoyment.

BW



FIRST-DAY TARGET SCORE
2,000

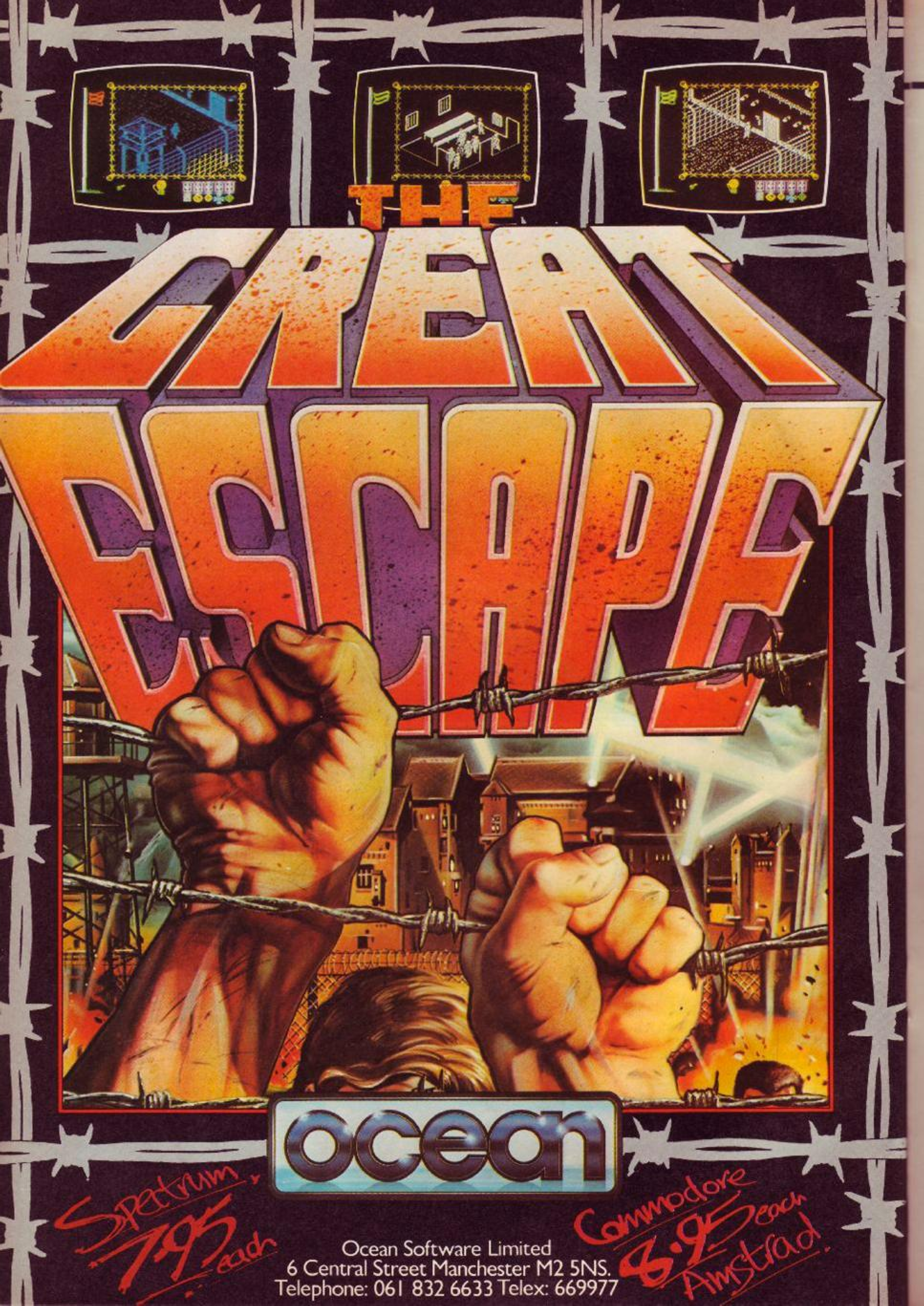
GOOD NEWS

- **30 levels of increasing difficulty.**
- **Excellent split-screen scrolling.**
- **Interesting control feature in the crizza.**
- **Nice range of game-altering options.**
- **Competitive two-player action.**

BAD NEWS

- **Gameplay can get quite repetitive.**
- **The graphics are small and ordinary.**

GRAPHICS	68%
SONICS	60%
GRAB FACTOR	82%
STAYING POWER	73%
A A RATING	78%


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POPEYE
Macmillan, £7.95 cass, joystick or keys

One of the cartoon world's most enduring characters now appears in an arcade game where he gets to do what he always does: fight with Bluto for Olive Oyl's attentions. The game's main claim to fame is the large animated characters that gallivant around. Popeye and Bluto look musclebound and mean.

The game takes place on 16 screens where you, as Popeye, have to collect 25 hearts and give them to Olive. She has to be constantly supplied so that her 'love level' doesn't fall too low. The screens are a collection of buildings, ropes, stairs and strange objects that you can walk in front of and, in many cases, behind. This last factor is important in avoiding the dangers that occur on many screens.

SECOND OPINION

Popeye is certainly as large as life in this game. Some characters take up practically a third of the screen – they are big and in most cases bad for your health. An extremely colourful game – possibly overdone with some abominable colour clashing. Some humourous touches add to the game, but nothing over the top. No lasting appeal; in fact I think I'll switch off.

RpM

Apart from Bluto prowling near Olive's house there are other creatures. If any of them hits you you'll be laid flat out. Only a can of spinach will revive you. To avoid these collisions you need to duck into doorways, climb out of harm's reach or jump down to somewhere.

If you aren't carrying spinach or if Olive's 'loveometer' runs out, the game ends.



All the nice girls love a sailor

There are three main types of object in the game: hearts, spinach and keys. The keys all look the same but particular ones open specific doors, so you have to complete sections of the game in the right order. There are other objects: a coin, fuse and bottle for instance. Their purpose should become clear as you encounter particular screens.

Despite the large figures the graphics don't really impress. They're too chunky and clash with the backgrounds too often. The gameplay doesn't require much puzzling, but you will have to do a fair bit of exploring and trial-and-error before getting far. Some of the places you can reach aren't immediately clear – like getting on the UFO and where you can get off it – so perseverance is needed even if it looks as if there's no way out.

It's a dated game idea, but it's still enjoyable and has some good animated characters.

BW

FIRST-DAY TARGET SCORE
5 hearts

GREEN SCREEN VIEW
Lots of lovely shades of green.
RpM

G O O D N E W S

- **Large animated characters.**
- **Ability to go in front of and behind things.**
- **Tough working out the right route.**

B A D N E W S

- **Chunky graphics and garish colours.**
- **Not much puzzling.**
- **Annoying to walk off the edge of a screen and straight into a creature.**

GRAPHICS	61%
SONICS	48%
GRAB FACTOR	60%
STAYING POWER	57%
A A RATING	59%

STREET HAWK
Ocean, £8.95 cass, joystick or keys

Here we go again with yet another TV licensing deal and yet another game that has taken an inordinate amount of time to get to the shelves. Fortunately, unlike other recent releases, this one actually has some decent graphics and reasonable gameplay. It may not set your Amstrad alight, but at least you won't be stomping on the cassette in frustration.

Street Hawk is a motorbike and you are a 'cop with a test-pilot mentality' – which presumably means you like crashing things. This is just as well because you get to do a lot of that – both to yourself and to everyone else.

The action takes place on a downward-scrolling roadway. Your bike appears in the middle of the screen, viewed from overhead. You have to deal with a group of criminals engaged in crimes, while trying to avoid civilians and the police.

The motorbike can accelerate up to 100 mph, move left and right, leap in the air, and shoot a laser forwards. It will meet several types of vehicle on the road, some bad guys and some innocent, travelling at different speeds. You can shoot them or jump on top of them, but only the bad guys get you points. Bumping into the other traffic reduces the armour on the bike; so does being shot by gangsters appearing from manholes.

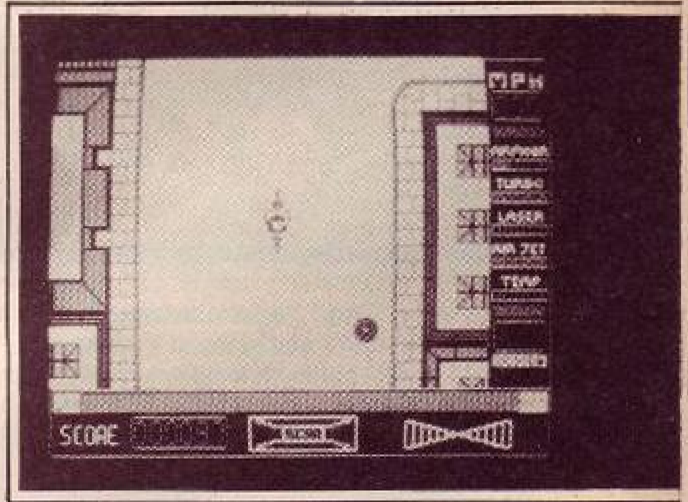
SECOND OPINION

Some fairly nice graphics, with some great motorbike swerving scenes. I enjoyed blasting everything in sight; if my laser became too hot, then jumping on the car roofs made a nice alternative – you can only get away with this briefly, for the police would soon come charging in. Try as you might, you just can't shoot them (must have reinforced chassis).

Playing the game by the rules becomes rather boring: the same tasks to carry out every time. Make your own rules, play it your way – I did and thoroughly enjoyed it.

RpM

The first task is to pull up outside a wine store. The screen changes to show the store on a corner. You control a cursor that fires a laser and must shoot three robbers as they charge out of the store for their getaway van. If you succeed you drive on to try to destroy the black sedan car of a kidnapper. Succeed in doing that and you'll have to repeat the task, but with heavier traffic to contend with.



You'll usually find the police on your tail at some point as well. The only way to shake them is to engage Turbo. This clears the street of traffic and races you ahead at 250 mph. Turbo can be used only a limited time on each run.

Not a classic by any means, but an enjoyable fast-action driving game.

BW

G O O D N E W S

- **Good scrolling roadway.**
- **Fast shoot-em-up action.**
- **Progressive difficulty keeps you interested.**
- **Nice cars and scenery.**

B A D N E W S

- **Wine-store scene is simple and uninteresting.**
- **Driving and shooting won't hook you for very long.**

GRAPHICS	72%
SONICS	51%
GRAB FACTOR	70%
STAYING POWER	58%
A A RATING	66%



IT'S A KNOCKOUT
Ocean, £8.95 cass, joystick or keys

Remember the maniacal laugh of Stuart Hall and the aimless banter of Eddie Waring? Well, sadly, this computer version wouldn't even raise a chuckle out of Stuart let alone Eddie. Frankly I think it ought to be renamed *It's a Cock-up* and given away as a booby prize on *Blankety Blank*.

There are six mini-games based on the TV series with six countries taking part in the competition. Up to six players can compete or just one player against the computer. Interspersed with five events is the marathon, where one country takes a turn at it between rounds. The other five all happen at once. All the events are just a single screen, except for the last one, the obstacle race.



SECOND OPINION

I must say, it's good to see Ocean keeping up standards and producing utter rubbish such as It's a Knockout. *It has to stop! Software houses must realize that big advertisement campaigns and a lot of hype are not the only factors necessary to sell a game.*

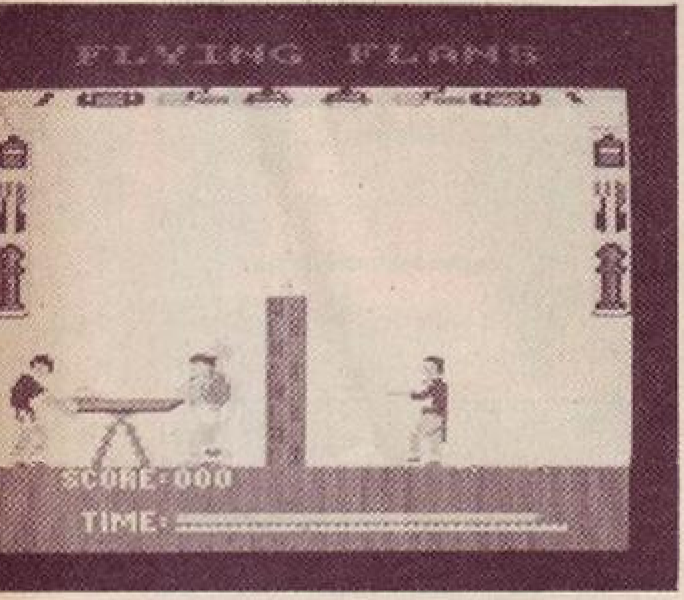
'It's a ...up' has pathetic square-looking graphics, raspberry-like soundeffects (with the occasional beep thrown in) and amateurish programming. All this for £9! What a bargain!

RpM

The marathon game is called Bronte Bash where you have to move a weight above six holes and drop it on the brontosaurus that appears before it ducks back down again. As with most of the games it's a matter of hitting as many as possible within a time limit.

The first game is Flying Flans. You stand on the right of a wall while flans are thrown over it for you to catch. If you miss them they land on the floor and make you skid about while trying to catch more flans. Harlem Hoppers is next: you control a character attached to a piece of elastic. He has to run across the screen to catch balls rolling off a camel's back. This one takes very careful timing and a good deal of luck.

The Titanic Drop is one of those entertaining water events where everybody gets wet. Four contestants will one at a time slide down a rope and you have to drop them into the water at the right time to pass through a ring in the water. The rings have varying points values that change as the game goes along. After Titanic comes the Diet of Worms, where you control a bird that has to peck up as many worms as possible. They wriggle up and down while another bird also tries to eat them.



The last event is the obstacle race. It's a scrolling decathlon-type game where you have to waggle to move along and jump over obstacles like a water ditch, log and ball. Each event scores six points for the winner down to one for last place. The grand total of all events determines the winner.

The graphics for all the events are really quite dreadful. It wouldn't surprise me if it had been written in Basic. The events rely a lot on random chance and have very repetitive gameplay anyway. As a silly party game for six players it might have some entertainment value, but otherwise it's very disappointing.

BW

FIRST-DAY TARGET SCORE
15 points against computer opponents

GOOD NEWS

- ▶ Multi-player games may be fun.

BAD NEWS

- ▶ Graphics are very bad.
- ▶ Control is jerky and the game pace slow.
- ▶ Simple repetitive tasks.
- ▶ It isn't even funny.

GREEN SCREEN VIEW

I couldn't bear to look.

RpM

GRAPHICS	16%
SONICS	19%
GRAB FACTOR	18%
STAYING POWER	16%
A A RATING	17%

TIMELORD
Alpha Omega, £1.99 cass, joystick or keys

The instructions for AO's latest are sparse, to say the least. But then you'll have to play the game for only a minute to see that they're all you need. The game is a straightforward exploration type, where you just have to search for objects and blast lots of aliens on the way.

The task is to collect the four missing pieces of your time machine that are scattered about the planet Oxijenless. I'll bet you can't guess what you run out of during the game, can you?

Three aliens materialise on each screen, which will also contain at least one exit and some superfluous graphics. Going through the doorways flicks you to another screen. There are several basic designs for the screens, representing different areas like caves and the planet surface.

The three aliens are the same on every screen but have different characteristics. Two of them are slow-moving and cannot be destroyed. The third is fast and homes in on you, but can be killed by your hefty missiles. This only gets rid of him temporarily, though; he rematerialises a few seconds later.

SECOND OPINION

Lots of screens to hunt around in – all very similar, though. Even the characters are the same from screen to screen; they are fairly drab and flicker at all the wrong times. It's a budget game, and it shows.

RpM

As you race through the screens the oxygen supply has to be kept up by collecting objects. Curiously these take the form of money – perhaps there's a friendly oxygen seller lurking around.

There's also an axe to be found. This allows you access to other areas of the game.

GLIDER RIDER
Quicksilva, £8.95 cassette, joystick or keys

'Everyone has heard of the Abraxas Corporation – Arms for Anyone, Anywhere, Any Reason, Any Quantity,' says the packaging. They are a mean bunch, hiding away on their plastic island, EoOs, somewhere in mid-Pacific. Producing and selling weapons is their game.

Paethon is your codename: you're a member of the SBD task force – silent but deadly. With your mark-5 glider (collapsible), E37 motorbike and nine hand-grenades, you are ready to take on the world – well EoOs at least.

Your mission is to destroy the heavily defended nuclear reactors on EoOs. These provide energy for the plastic island – with its nylon grass and polythene trees (no doubt tupperware birds as well). Of course any self-respecting island with nuclear reactors would also have a decent ground-to-air laser defence system. ... I think they have gone over the top with this.

SECOND OPINION

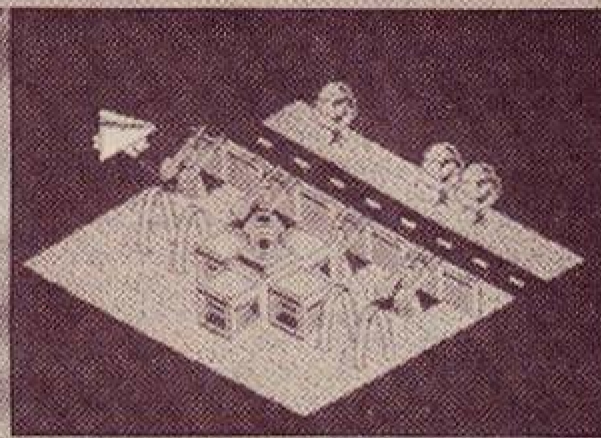
It looks and sounds stunning, superb 3D graphics, a driving beat for the motorcycle and light airy tune for gliding – what more could you ask? A playable game with a lot more action, that's what. It's delightful as far as it goes but if only they'd put in some easier tasks and gratuitous violence it would have been so much better.

BW

Once you land on the island, the liveliest music I have ever heard on an Amstrad comes to your ears – it is so very appropriate, continuing throughout the game. You find yourself cruising a motorbike around the island. All the reactors, laser turrets, even tanks (stationary), are highly detailed, making very pleasant viewing – even if everything is one colour: it obviously wasn't possible to dye the plastic. However, you are here to cause destruction, not to admire the scenery.

'Objective: destroy external reactors.'





That's a good one; I have spent hours trying to carry out the order, with no success. The idea is to disable the lasers by bumping into what appear to be pylons – this causes the lasers to go haywire and shoot straight up in the air.

Rush to a slope and lift off. To do this, press all your directional keys. If you are lucky your bike will transform into a glider and you'll be soaring high in the sky ; if not, try again. Once in the air, you should come down low, and while the lasers are distracted, bomb the reactor. (These are spherical and have tiny slot-like windows.)

That is the theory at least. Putting it into practice is, well, nothing short of impossible. Either the laser will spot you immediately and 'Oops, you seem to have been frazzled,' or you land in the sea and 'Oops, you have been eaten by sharks.'

Barring that, the reactors seem to be impregnable. I bombed them a hundred times, and nothing happened. At some stages I was virtually sitting on a reactor and chucking grenades hell for leather... frustrating, very frustrating.

I ended up flying or even riding around the island, admiring its beautiful landscape. One discovery was that more grenades could be obtained from stores on land. And time is a limiting factor: only 30 minutes to complete the task – aargh. Lovely to look at, even listen to, but where is the destruction, mayhem and chaos that was promised?

RpM

FIRST-DAY TARGET SCORE
Bomb a reactor (we couldn't)

G O O D N E W S

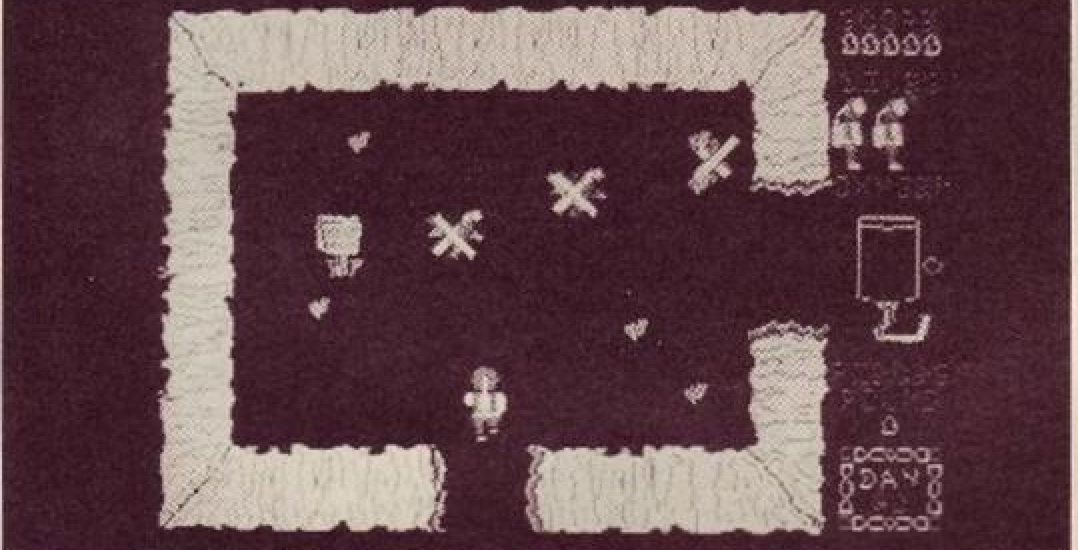
- **Fabulous music track.**
- **Superb 3D graphics.**
- **Wonderful animation on the glider.**
- **Great idea of changing the bike to a glider and back.**

B A D N E W S

- **Spoilt by impossiblity of the tasks.**
- **Occasional bug will require restarting (not reloading).**

GREEN SCREEN VIEW
There wasn't much colour to start with, but everything is clear.
BW

GRAPHICS	86%
SONICS	92%
GRAB FACTOR	82%
STAYING POWER	51%
A A RATING	77%



The graphics are reasonable, but the animation of the characters isn't very good. The gameplay is fairly repetitive – just running around searching and shooting. The playing area is quite large, however, so there's a fair bit to keep you exploring.

Not bad for those of you who love doing maps; not good if you want a bit of variety.

BW

FIRST-DAY TARGET SCORE
25%

G O O D N E W S

- **A lot of screens to explore.**
- **Conserving oxygen won't be easy.**

B A D N E W S

- **Very repetitive searching and shooting.**
- **Unimpressive characters and animation.**

GREEN SCREEN VIEW
Looks better in green for some reason.
RpM

GRAPHICS	47%
SONICS	16%
GRAB FACTOR	57%
STAYING POWER	52%
A A RATING	56%

FROST BYTE

Mikro Gen, £8.95 cass, £13.95 disk, joystick or keys

Ever since the *Wally* series Mikro Gen has had a reputation for excellent games graphics. The runcontinues with this cleverly titled game. Anyone who's seen *Equinox* will recognise the excellent use of colour and impressive character design that features again here.

The game itself is much different. It stars a Kreezer called Hickey who looks and moves just like the Slinky toy that was popular some time ago – that spring thing that somersaults down the stairs.

The Kreezer has just escaped from captivity. You have to guide him through a hazardous and icy cave system to release five other Kreezers and get out of the caverns. He moves by flipping end-over-end so that when stationary he either points straight up or is curved over in an upside-down 'U' shape. He can also jump upwards and move through the air while drifting back to the floor.

You encounter many hazards in the caves. Some you can shoot if you can find some ammunition. The bullets go straight up when you're vertical and horizontally when you're in the middle of a 'step'. Other creatures just have to be avoided, while some appear to be there just for decoration. If you collide with one of the creatures or fall too far, a life is lost. There are replacements but they aren't easy to get to.

As you travel through the caves you find coloured, diamond-shaped sweets which give you special powers when used. Red ones make you move faster, blue ones let you jump higher and green ones allow you to fall further than normal. These are all essential to the completion of the game. But watch out for when you're given a sweet you don't actually want.

SECOND OPINION

I hadn't seen Equinox *so this came as a pleasant surprise. I love the graphics and that Slinky character. Not only does it look good but it's tough as well. I think it's possibly a bit too tough to start with – you may take some time getting off the first two screens – but once you get into it it's very gripping stuff. Give me a few weeks and I might crack it.*

RpM

Even with the sweets you need some occasional extra help in the form of spring platforms and mattresses – they give you an extra boost when jumping or a soft landing for a long fall. You're going to need all this help because the creatures present some wicked timing problems that require thought and speed.

Each Kreezer has to be rescued within a time limit before it is eaten. Being gobbled up is curiously called the 'twang'. To release the poor unfortunate you just have to get to the cage where he is held and touch him. Then you can head for the exit door – which leads to the next cave system and more challenges.

The graphics really are superb again with lots of colour, some great characters and humour. The gameplay is great with lots of nasty timing problems and a pleasing variety of obstacles and dangers. The five caves should be enough to test anyone. The only problem will be staying cool while dealing with the deadly opponents.

BW

FIRST-DAY TARGET SCORE
5,000

GREEN SCREEN VIEW

It's a shame to miss all that colour but everything's visible.

RpM

TRAILBLAZER

Gremlin, £9.95 cass, £14.95 disk, joystick or keys

Trailblazer is another game featuring a bouncing ball – like *Bounder* in 3D, but faster and more dependent on fast reflexes. Gremlin lives up to its excellent reputation for high-quality games that feature both originality and good gameplay.

In *Bounder* you had a landscape that scrolled underneath a ball viewed from above; here you view the ball from behind as the pathway scrolls toward you at a low angle. The aim of the game is of course to keep your ball on the course as it races by beneath. There are 14 different courses, each one of which has to be completed within a time limit. Nearly all of them are extremely difficult.

SECOND OPINION

This is a real tough one that will have you glued in front of the monitor. It's just as well they put in the practice mode because even learning the first couple of courses isn't easy. The scrolling path is great, although I thought it would have been nicer to have a larger ball. This one really put me through my paces. For anyone who likes fast action this is terrific.

RpM

Each course is made up of five lanes, and each lane is broken up into squares so as to form a grid. The squares come in different colours that have different effects on the ball when it hits them. And of course they are interspersed with gaping holes in the path which have to be avoided. The square's properties can be used to avoid the holes. But if you fall into one you lose valuable time and can mess up the rest of the course through bad positioning at the restart.

The four special coloured squares are white, yellow, green and blue. White causes you to bounce, yellow speeds you up, green slows you to virtually a stop, and blue reverses the controls. You'll need to use white and yellow squares a lot to complete courses. The green and blue are nothing but trouble and can really mess up a run.

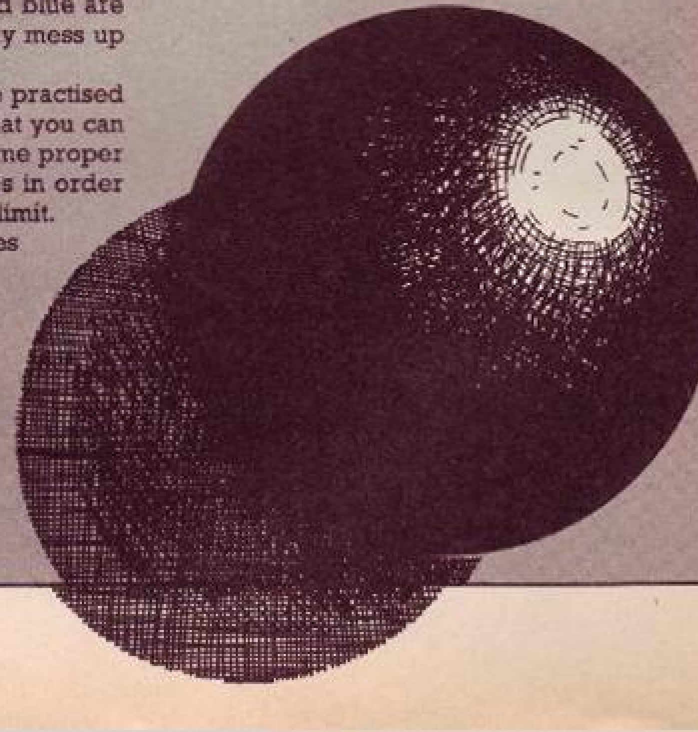
Any of the 14 courses can be practised with an increased time limit so that you can become familiar with it. In the game proper you have to complete the courses in order and against a much tougher time limit. They aren't forgiving of mistakes – one wrong twitch and you'll be off. And possibly you won't be able to recover to finish the run, because you're thrown back onto the course moving and may be completely out of position.

GREEN SCREEN VIEW

It's not easy telling which coloured squares are which – it can cost you vital split-seconds.

RpM

Apart from guiding the ball left and right, you control its speed. High speed is essential for completing courses in time, but tricky sections can be taken slowly. You also start each course with a limited number of 'manual' jumps, which are handy because there's not always a white square there when you need one.





Your Kreezer slinks around the icy caves

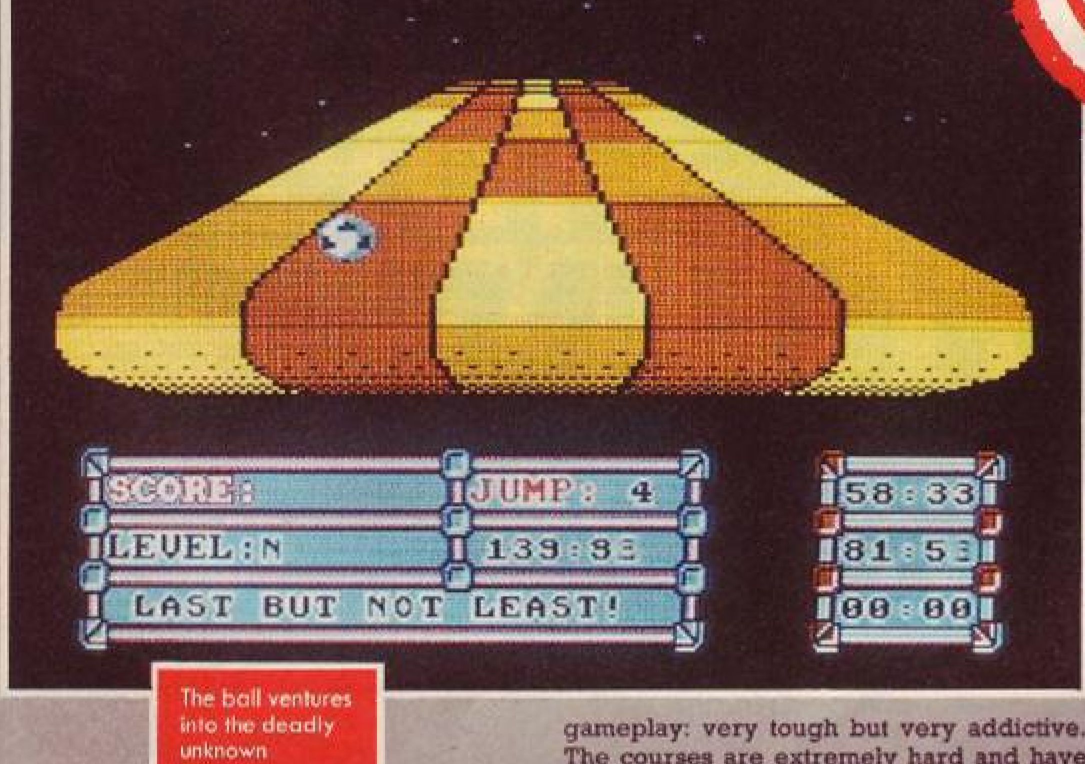
G O O D N E W S

- ▶ Excellent colour graphics.
- ▶ Humourous and well-drawn characters.
- ▶ Tough timing problems everywhere.
- ▶ Good features like sweets and spring platforms.
- ▶ Five tough caves will keep you busy.

B A D N E W S

- ▶ One or two places where you can't do much about quick deaths.

GRAPHICS	91%
SONICS	68%
GRAB FACTOR	90%
STAYING POWER	88%
A A RATING	89%



The ball ventures into the deadly unknown

As ever with Gremlin games, the graphics are superbly done. The scrolling path gives a good impression of movement. The music is nice too. But the clincher is the gameplay: very tough but very addictive. The courses are extremely hard and have to be practised until you're familiar with every part of them. But once you are it's very impressive and great fun zooming down them at full pelt leaping over and past the yawning holes.

BW

FIRST-DAY TARGET SCORE
6,000

G O O D N E W S

- ▶ 14 very tough courses.
- ▶ Fast, scrolling path gives good impression of movement.
- ▶ Wonderful when you complete a course without a fault.
- ▶ Very addictive as you try to get courses right.
- ▶ Very simple features that work well to produce a tough game.

B A D N E W S

- ▶ Perhaps too fast and tough for some.

GRAPHICS	87%
SONICS	70%
GRAB FACTOR	89%
STAYING POWER	83%
A A RATING	86%

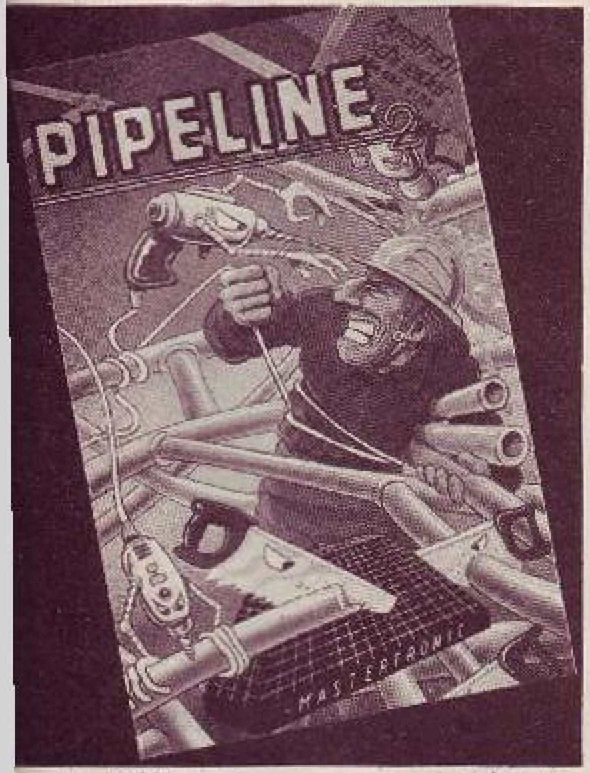
PIPELINE 2

Mastertronic, £1.99 cass, joystick or keys

If you can remember back to issue one and our *Amscyclopedia*, you'll probably remember a now-departed software house called Taskset and their game *Super Pipeline II*. It was a full-price product then, but that was over a year ago. Now it's still the same game but with a different pricetag and under a different label.

If you remember the game from way back then, you'll just want to know that this is exactly the same game. But I'm sure there are plenty of you who've joined us in the past year that don't know about it.

The star is Foreman Fred. He has to complete 16 screens of action by filling barrels at the bottom of the screen. At the top is a tank of water that gradually empties into a twisting pipe system, which weaves all over the screen, and eventually flows out the end and into the barrels.



While this is going on you are clambering around the pipe system trying to stay alive and stop creatures and tools – which sneak in from the edges of the screen – making holes in the pipes. Most of the tools can be shot with your gun when they are horizontal with you. A lobster, however, can be shot only from behind, and a shower of tacks not at all. If one of these enemies gets to you, you plunge to a nasty end off the pipe – unless your trusty helpers come to your rescue. Fred's mates appear two at a time and can be sacrificed to the tools without cost, for they will quickly reappear.

SECOND OPINION

This was an immensely good game the first time it came out. Today, at a knockdown price, it still seems good on comparison with much other software. The tune is excellent, and graphics outshine many present-day offerings. If you haven't got Super Pipeline II, *then go out and buy it. For £2, you just can't go wrong.*

RpM

The helpers also perform the task of repairing any leaks in the pipe, so they're kept constantly busy. You have to lead them to the leaks before they start work, and while they're following you they can guard your back from attack.

If you leave leaks too long your water will start to run out and decrease your score, as it draws on a reserve supply. If you fill the barrels you progress onto a new screen with more barrels to fill.

GREEN SCREEN VIEW

Certainly clear enough to play.

RpM

The graphics and sound are still good today, although the same niggle remains about the characters going behind pipes and being obscured. After a bit of practice the game is relatively easy – you find safe spots on the pipes – but it's still a lot of fun. And it's cheap now as well.

BW

FIRST-DAY TARGET SCORE

100,000

GOOD NEWS

- ► **Nice cartoony graphics.**
- ► **Jolly soundtrack.**
- ► **Still a very original game (a sad reflection on many other software houses).**

BAD NEWS

- ► **Characters disappear behind pipes.**
- ► **Rather too easy to complete.**

GRAPHICS	63%
SONICS	67%
GRAB FACTOR	78%
STAYING POWER	68%
A A RATING	76%

MIAMI DICE

Bug-Byte, £2.99 cass, joystick or keys

Yet another gambling game! This one from Bug-Byte is a faithful representation of the American dice game 'craps'. Up to four players at once can participate; each takes a turn to bet and throw the dice.

Craps is a fairly complex game, with many obscure rules. I'll give only a very brief summary, although several pages could be taken up.

You throw dice and bet on the outcome. A casino's betting table is laid out in a complex pattern, with various bet types clearly marked in boxes. Several combinations of bets make all sorts of odds available.

The person rolling the dice is obliged to bet he will have a winning outcome. If a 7 or 11 (called natural numbers) are rolled first, it's an immediate win. If you think that is very favourable, then rolling a 2, 3 or 12 (craps) will wipe the smile off your face. Any other number thrown, known as a point number, will mean subsequent throws are necessary to determine a win or lose. Here it becomes more complex, because if a 7 is now thrown, you automatically lose.

SECOND OPINION

Once I'd discovered the playing keys and tried my best to understand the rules, there was revealed a good gambling game. The characters are quite entertaining at first – they have to be to keep you interested. You'll have to work hard to get to grips with all the various betting areas. Once you have, this is a tough realistic simulation.

BW

The betting options will drive you mad. The instructions left me more confused, so I ended up placing bets without a clue what they were for – sometimes I was lucky, other times not.

At the start of the game you can choose how many players will participate, and which characters they will assume. A screen then pops up showing your character and three opponents. There is of course also the croupier, who tells you what is happening at any stage of the game. The foreground graphics show the table with any bets placed and, when thrown, the dice.

There is a strange soundtrack with the game. I couldn't make up my mind what I should do to it – either take up my magician's garb and do conjuring tricks, or grab the nearest young lady and waltz away.

It is a pity the cassette inlay was only slightly altered before being used for the Amstrad. There is no 'Megaloading system with Speech', nor do the suggeseted keys work. To help you along, these are the correct keys and what they do:

Keyboard	Joystick	Player	Key
Q	Up	1	Q
A	Down	2	Z
O	Left	3	@
P	Right	4	/

It is amusing to watch the figures in action: the hippie whose glasses fall down his nose will constantly readjust them, for example. Their eye movement is exceptional, giving them a very shifty air.

This is another game that is nice to look at and listen to but unfortunately is spoilt by having such a complex betting system. It does get boring.

RpM

GOOD NEWS

- ► **Nice characters, with amusing antics.**
- ► **Merry music to accompany your betting.**
- ► **The cassette cover is rather interesting.**

BAD NEWS

- ► **Instructions are misleading and wrong.**
- ► **Play becomes boring and repetitive.**

GRAPHICS	64%
SONICS	74%
GRAB FACTOR	57%
STAYING POWER	49%
A A RATING	53%

XENO

A'n'F / Argus, £9.95 cass, joystick or keys

Here's another one of those intriguing games that is very simple in concept but strong on that indefinable quality – addictive gameplay. The action takes place in an oval arena with a goal at either end. On the rink are just three things: a ball and two objects looking like a cross between a cream bun and a curling stone.

They are in fact the two players, one or both of which can be under your control, and they're used for smacking the ball around the rink. The basic idea is simple: you just try to put the ball in the other player's goal by knocking the ball around with your bun.

There are three screens making up the rink, the ball always being in the picture but the players often being out of sight.

You can play against either the computer or another player. In either case there are a number of parameters that have to be set up that determine the speed and difficulty of the game. Once you've started you must learn how to control your 'stone'. You can actually move an arrow freely around the rink but after a specified time limit it returns to the starting position. If you press Fire while it's away from you, the stone flies off in that direction.

The players alternate with their arrows. But if you delay and don't take a shot immediately, the arrow will disappear and your opponent gets another shot. Apart from the goals the rink is enclosed by elastic sides, so that when you or the ball bounce into it you just ricochet off.

You can set the amount of time allowed for positioning the arrow and taking a shot and also the speed at which the computer plays. The match is played over four quarters; you can set the length of these, up to a maximum of nine minutes each. These settings allow you to vary the game from quite sedate action and long matches to very fast reaction play and short matches.

SECOND OPINION

This has lovely graphics, albeit only in shades of blue. Battling against the computer at the higher levels can be real joystick-wrenching stuff – shooting your 'doughnut' at high speed toward the puck can be very satisfying, especially if you score a goal in the process. May lack lasting appeal, but is definitely worth a look.

RpM

The computer opponent is very tough on the faster levels because he's very accurate and never misses a shot. However, you can put him off his stroke by ramming into him or shielding the ball from him. The two-player game is also a lot of fun with intense competition.

The only drawback with the game is that despite its initial addictiveness there just isn't enough variety or features to keep you hooked. For a while it's immense fun and a challenge but the lack of variety means it's easy to tire of the action.

BW

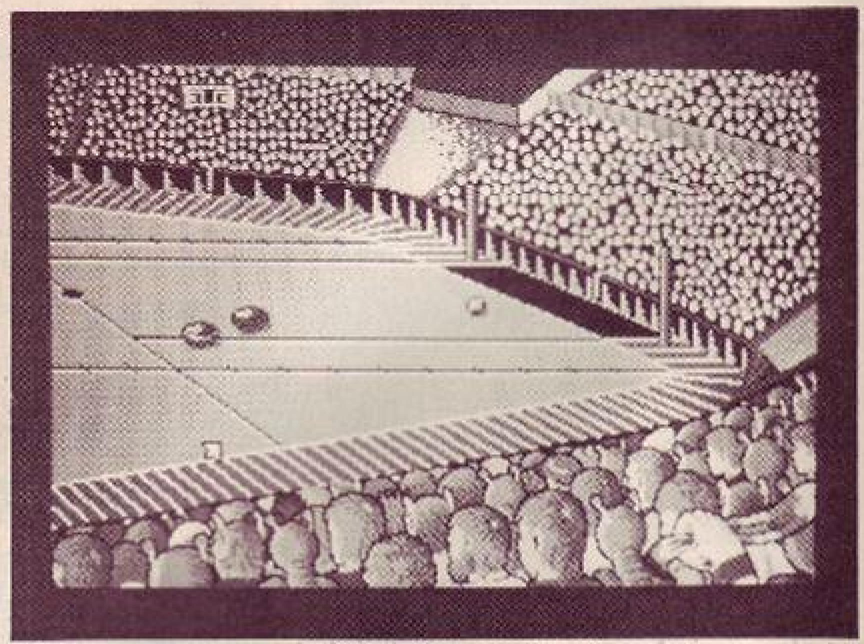
FIRST-DAY TARGET SCORE

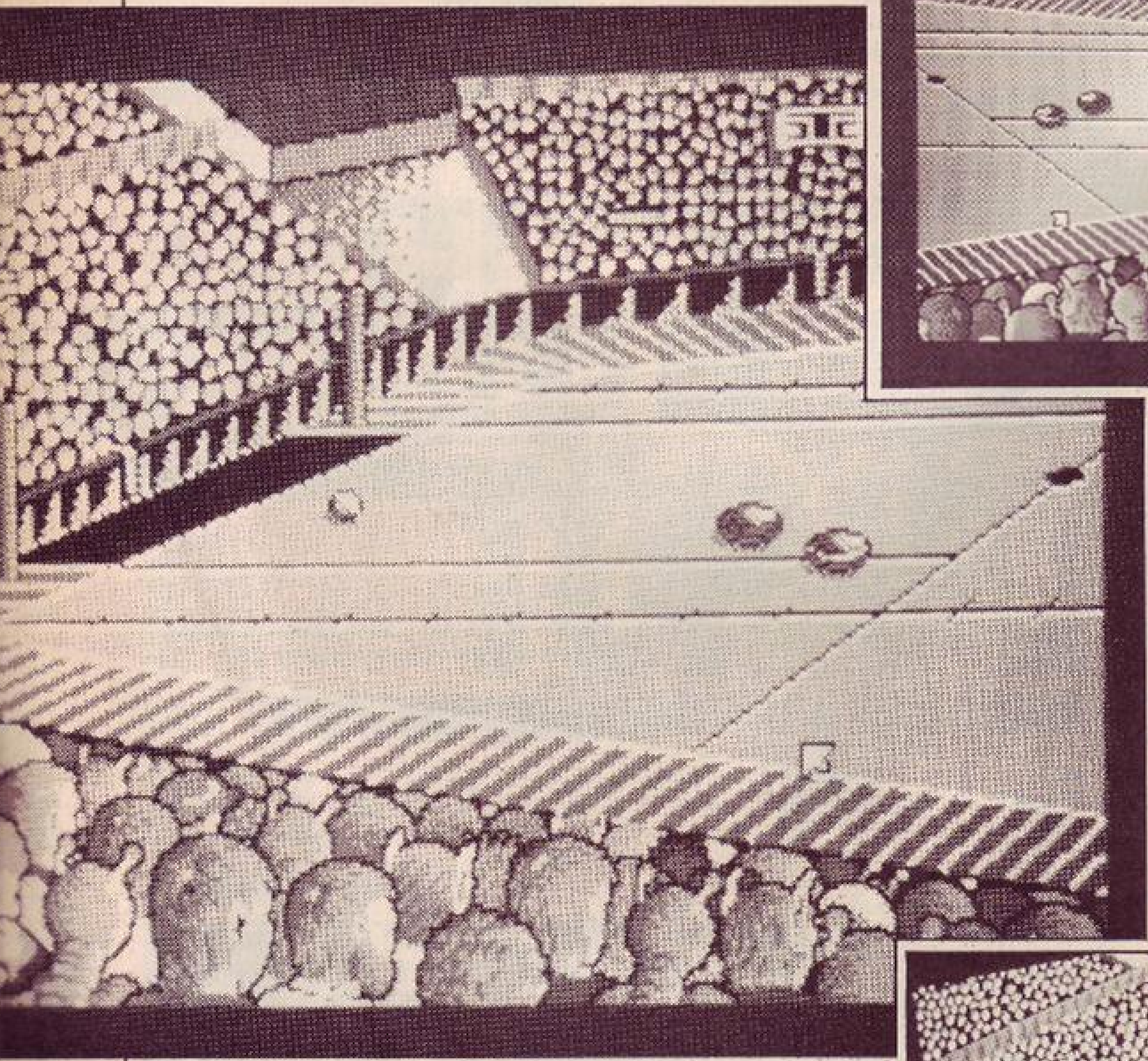
Beat computer at speed 5

G O O D   N E W S

- ▶ **Simple and addictive gameplay.**
- ▶ **Parameters allow you to change the game to suit any speed or skill.**
- ▶ **Good rink and crowd graphics.**
- ▶ **Competitive two-player excitement.**

Rinky dink plink plink...goal!





B A D   N E W S

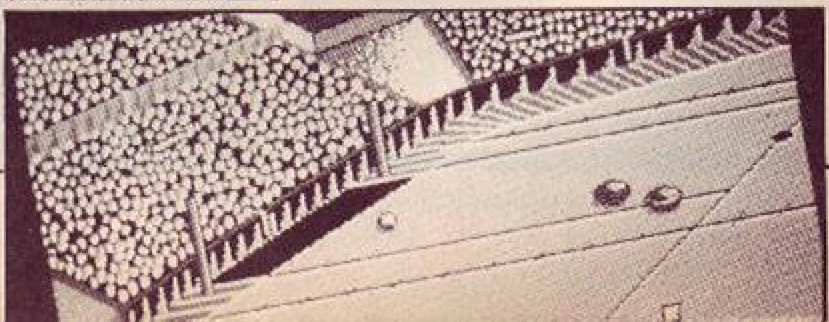
- ▶ **Not enough variety in the action.**
- ▶ **Awkward not always being able to see your player.**

GREEN SCREEN VIEW

Crystal (ice?) clear.

RpM

GRAPHICS	74%
SONICS	22%
GRAB FACTOR	87%
STAYING POWER	70%
A A RATING	78%





SPECTRUM SCREENS

Dandy is the massive arcade adventure that takes you through some of the most detailed dungeons you've ever seen. Either solo or with a (brave) friend you can hack, thump and zap your way through spectres, necromancers and other dungeon-dwellers whose concern for your health and well-being is zero.

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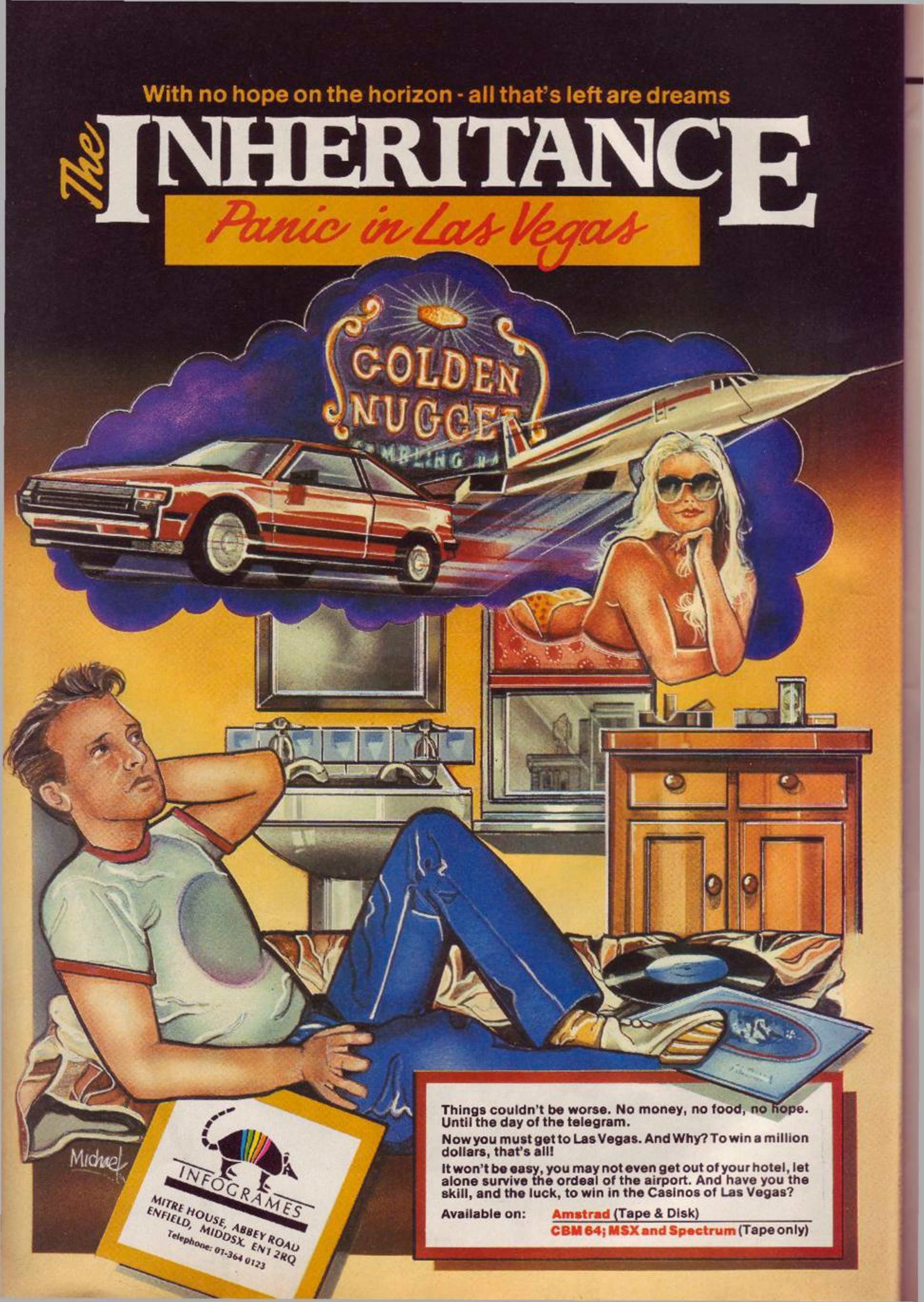
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GALVAN
Imagine, £8.95 cass, joystick or keys

Those coin-op conversions keep on coming. But down in the wilds of Somerset, people think arcades are where you do your shopping. This is one of those games I've missed while tucked away down here – but judging from this version, I haven't missed much.

The game takes place in a two-dimensional cave system with multi-directional scrolling. It's inhabited by a nasty array of alien creatures. You control a man clothed in futuristic knightly garb who has to battle through the caves to a demon. You have to destroy the demon by shooting its parts several times. Then you can move on to the next level of play.

The caves have various backgrounds including brickwork, water and hi-tech scenery. The trouble with some of these is that the colours haven't been very well chosen: there is little contrast. The definition of the characters is also weak. As a result everything on screen looks indistinct. Although you can tell what's going on it's like looking through an unfocussed camera.

SECOND OPINION
There is a good idea (somewhere) to this game. It's unfortunate that drawing-board ideas can't always be carried forward into programming technique. The screen is miniscule. It just about manages to fit your character, a bit of surrounding brickwork and, if you are very lucky, a few million aliens popping in for tea.

Not the wisest choice of colour, nor even the smoothest scrolling around. For that matter control isn't too hot either. There must be something good about it. Ah yes, lots of nasties to zap.

RpM

The size of the scrolling screen doesn't help either. It's very narrow, and as you move left or right it's practically impossible to react to anything that comes straight toward you.

As the knight runs into the creatures a power gauge is depleted. He can fight back against the aliens – initially just by punching them but with weapons if he can find a power pyramid. The pyramids put his power up and give him a weapon. Which one depends on the power level. As the power runs down again, the weapon gradually becomes less powerful until your knight is back to a fist. Pyramids are found just lying around or by killing space-suited foe.

The caves have several floors. You can get between them using stairs, holes in the floor or jumping. Some areas have special aliens, such as sharks and stingrays underwater; some have nasty effects on you like temporary paralysis.

GREEN SCREEN VIEW
Was that a brick that moved or was it my character?

RpM

The graphics, narrow screen and awkward scrolling make the game unimpressive to look at. It's not much better to play. You'll find yourself wandering around doing a lot of shooting, which achieves little except to gain you the odd pyramid. Certainly not one of the better coin-op conversions.

BW

FIRST-DAY TARGET SCORE
20,000

G O O D N E W S
- **Change of weapons adds interest.**
- **Quite large areas to explore.**
- **Some nasty varieties of monsters.**

B A D N E W S
- **Very narrow screen display combined with awkward scrolling makes play difficult.**
- **Graphics lack contrast and definition.**
- **Gameplay consists merely of wandering around searching for the demon.**

GRAPHICS	66%
SONICS	69%
GRAB FACTOR	61%
STAYING POWER	50%
A A RATING	57%

QUESTOR
Cascade, £8.95 cass, £13.95 disk, joystick or keys

It doesn't take much to work out that you're trying to find something: the title gives that away. And you'll soon find out that you've got to do it on a flying carpet. The quest is to find and rescue the daughter of the Nawab from some nasty catacombs where she's imprisoned – and that involves solving a good many problems.

You start deep within the caves and spend the whole game flying about on the carpet. This airborne doormat is quite awkward to control and you'll die many times early on trying to master it.

The caves are inhabited by all manner of evil creatures that appear on most screens, moving in patterns up and down or across the screen. The creatures either drain your energy or kill you outright. This is tough when you have only three lives. But some of the monsters can be zapped with weapons and objects found in the caves. Unfortunately finding out what does what, where and what to do about it (what?) is a matter of trial-and-error and many lost games.

SECOND OPINION
If you ram an alien accidentally, you will find you are stuck and all your energy drains exceedingly fast. The walls must also have some form of adhesive: you can't just glance off them – you remain firmly embedded. This game is too demanding, and it's rather old hat.

RpM

There are quite a lot of objects and locations to find. Many of them are hard to get to and involve tough timing problems and removing obstacles from your path. You can carry only *three objects at a time*. When you come to where the object can be used – for opening a door, say – it happens automatically. There are some flashing objects that you can't pick up but which act as clues for you to work out.

The graphics and sound are ordinary with little to commend them. Most of the tasks are fairly straightforward as well, just needing a lot of blind experiment. The control is the most annoying feature: one twitch in the wrong direction can put you into the clutches of a monster and lose one of your precious few lives. There's enough challenge for ardent arcade-adventurers to plug away with, but there's nothing very special.

BW

FIRST-DAY TARGET SCORE
50,000

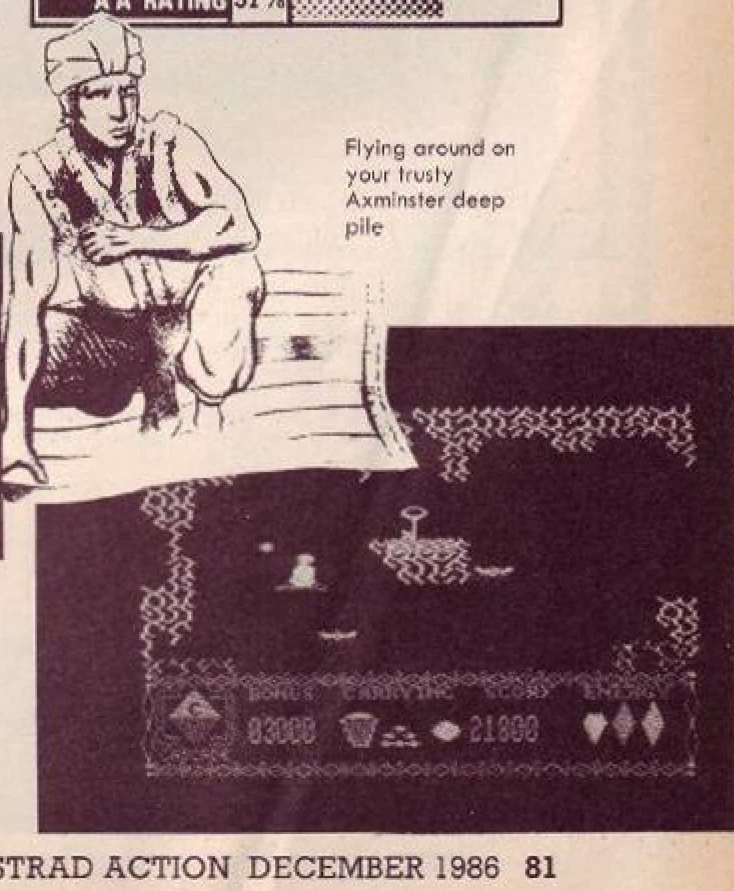
GREEN SCREEN VIEW
Good colour choice – everything is visible.

RpM

G O O D N E W S
- **Lots of objects and locations.**
- **Tough exploring with puzzles and timing problems.**
- **Wide variety of features and problems.**

B A D N E W S
- **Control is difficult, causing annoying deaths.**
- **Not very original.**

GRAPHICS	51%
SONICS	14%
GRAB FACTOR	59%
STAYING POWER	57%
A A RATING	57%



Flying around on your trusty Axminster deep pile

ICON JON

Mirrorsoft, £8.95 cass, £13.85 disk, joystick or keys



A great idea for a game, this: a program trapped inside your computer that doesn't want to die when you switch off.

Your task, of course, is to aid and abet the rebel program, Icon Jon, and get him out of the computer before the power goes off. To manage that you've got to complete many puzzles and explore the weird insides of the computer.

> **SECOND OPINION**
>
> *On reading the instructions to this game, I thought this was definitely for me. Unfortunately it was much harder than I had anticipated: I was barely able to leave the first screen without death standing over me.*
>
> *After several attempts I really started to enjoy the game, with its humour, chirpy characters and often devious puzzles. If you enjoy silly jokes, and don't fling the computer into the rubbish tip after failing miserably for the first few attempts, then this game is a must.*
>
> **RpM**

The screens are shown in 2D, and you move between them by going off either edge or 'into' a doorway by pushing up. Each location has a name – most of them are puns on the actual parts that make up a computer, such as the redundant interpreter and the klikety bit (keyboard). Scattered around the locations are objects which may not have any immediate apparent use but will help you complete the tasks.

Two other characters in the game move around freely among all the locations. They can provide invaluable help. They're called Andy Capacitor and Charlie Chiplin. Andy is a northener and Charlie a stuck-up southern snob. You communicate with them, and perform all other actions in the game, using a set of icons and window menus. The icons allow you to perform many different tasks while the menus provide all sorts of helpful information.

There are ten icons: status, chat, terminal, manipulate, act, move, note, help, save and quit. Chat lets you talk to the other characters on a number of subjects so that you can make them friendly and more helpful to your cause. The status option tells you how Andy and Charlie are feeling, as well as how you're doing in the game, while the help icon tells you where they are. Terminal puts you onto a computer terminal if you're standing at it, where a menu of options will be given to you.

Manipulate and act both involve handling the many objects you can find. You can pick them up, drop them, examine them and give them to other characters. You can also try to use them or more specifically dig, rub, wave, hit or combine them. One other handy feature is the notepad on which you can keep track of your progress and jot reminders of what you need to do.

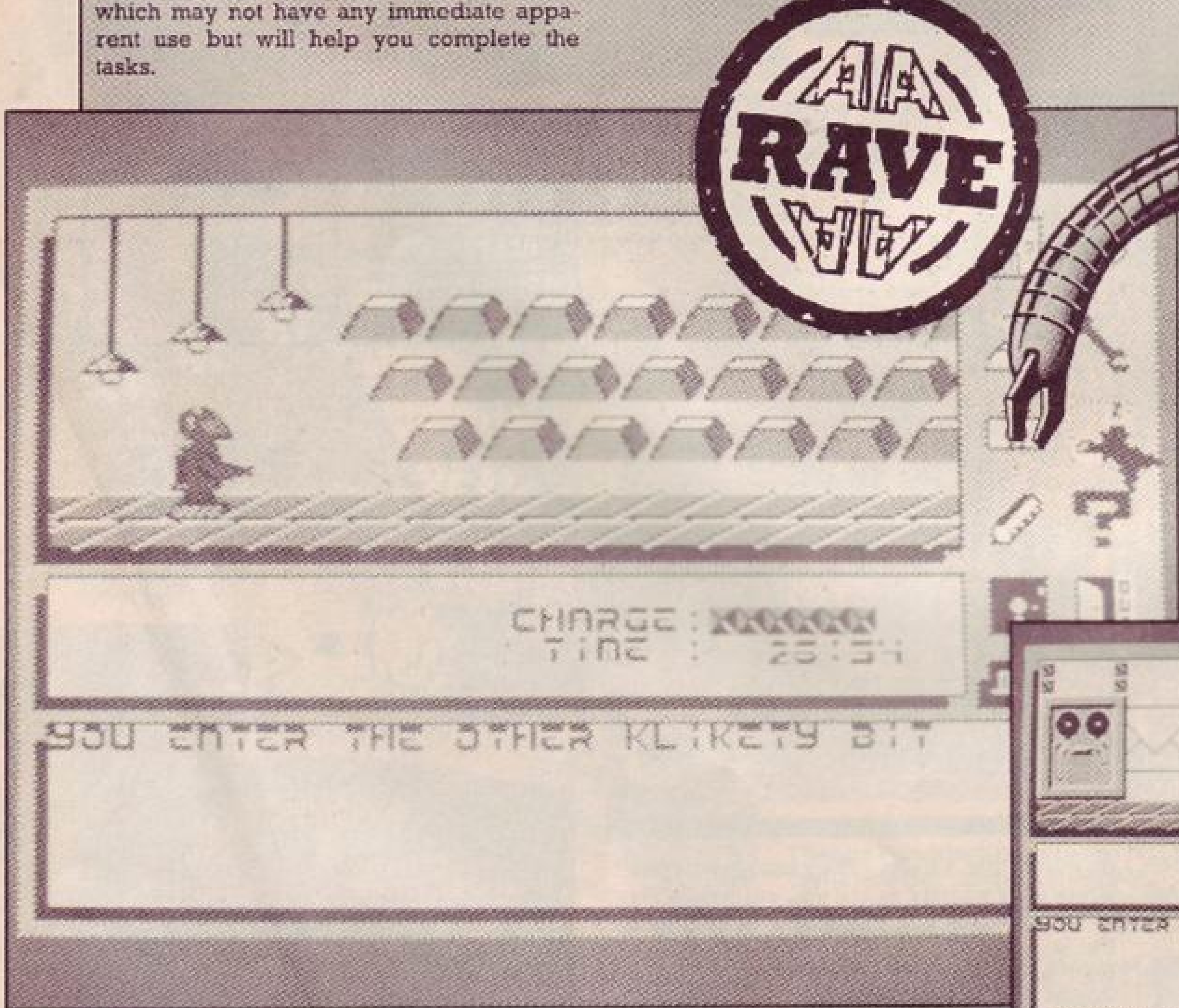
As you explore the computer there are various areas that can't be entered without the right object. If you do try to enter without a 'key' then an energy gauge decreases. The game ends when one of three things happens: a 30-minute time limit runs out, energy runs out, or you escape.

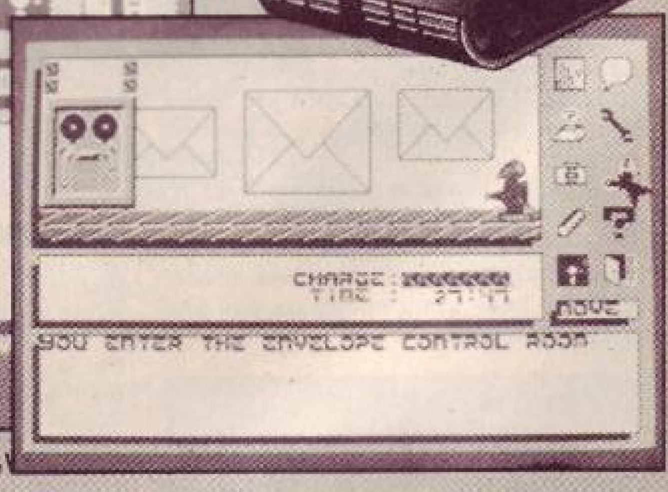
The graphics and sound aren't spectacular but the puzzles, icons and menus make the gameplay absorbing. It's a bit tough to begin with, until you work out the memory map near the start location (remember to use the 'breadcrumb' technique of dropping things to show where you've already been). Once you're well into the game there are plenty of objects, puzzles and humour that will keep you bashing away for many an hour.

BW

FIRST-DAY TARGET SCORE
15%







So that's what the inside looks like

G O O D   N E W S

- ▶ Plenty of locations with interesting names.
- ▶ Nice icon and window menu system.
- ▶ Characters to communicate and interact with.
- ▶ Lots of objects and puzzles to solve with them.

B A D   N E W S

- ▶ A bit tough to start with.

GREEN SCREEN VIEW

Absolutely no problem wandering through your computer's insides here.

RpM

GRAPHICS	70%	
SONICS	54%	
GRAB FACTOR	77%	
STAYING POWER	83%	
A A RATING	80%	

THE INHERITANCE

Infogrames, £9.95 cass, £14.95 disk, joystick or keys

Here's another French game that has plenty of elements of originality – in both presentation and gameplay. It comes in three parts in which you have to escape from your hotel, catch a plane to Las Vegas and then make a million dollars overnight. Sounds easy, huh?

The reason you've got to do all this is that your aunt has popped her clogs and is an ex-aunt, bequeathing you her whole fortune only if you can make that million.

SECOND OPINION

A fairly original concept here – a pleasant surprise. The graphics are detailed and colourful, compelling you to turn over or examine every object. Most amusing was bumping into another character; he (or she) would generally demand an item on your person. The problem is that when I am affronted in such a manner, the fire button gets a good beating. This does no good at all: it aggravates them, causing further demands to be placed upon your shoulders.

The Inheritance *has more than enough to hold your interest – if you don't like meeting other people, or even milling around airports, then I'm sure you wouldn't reject a good spending spree at the Las Vegas casino!*

RpM

At the start of the game you're placed in your grotty apartment on the 17th floor of a hotel and given $200 and an airline ticket to Las Vegas. Your first task, and probably the toughest, is to get out of the building.

The room is pictured as a single screen which you can explore using a cursor. Placing it over an object and pressing Fire may cause you to pick it up or reveal its contents. For instance, there's a bag which will come in handy, and lots of objects in cupboards and drawers. Once you've got what you need you can place the cursor over the door and head out into the corridor.

Each floor has a single corridor: a lift and stairwell on opposite sides in the middle, and rooms along either side. You can move along the corridor and turn around using the cursor. If you turn to face a door you can ring the bell to see if anyone's home or just try to go in on your own.

The problem with this leisurely inspection is that you've got only a few minutes to get to the airport and had better look lively.

Heading for the lift or the stairs you'll encounter the main problem: the building is full of people you owe things to. If you've got the right thing to give back to them they'll go away and not bother you again, otherwise they'll pester you incessantly.

The people appear as head-and-shoulders pictures with animated mouths, all looking like characters from a cartoon. They aren't all bad for you, but if you happen to offer them the wrong object it might be construed as a threat and bring all sorts of trouble down on you.

When you manage to get to the ground floor you've got another knotty problem: how to get to the airport. But I'm sure a resourceful individual like you can cope with that.

The airport is the second part of the game and involves you safely getting onto the flight, surviving some unexpected happenings and catching a bus to the casinos at Las Vegas. There are a number of different problems to solve and things to do to insure success. Trial-and-error is your best method of discovery.

At Las Vegas there are three types of game you can play. Some other places provide ways of raising more money if you get lucky or observant. The games are fruit-machines, craps (dice), and a numbers game called boule. You'll find it tough to make money very quickly on the tables, so to make the million you'll have to plug away for a long while.

The graphics in all sections are excellent, featuring interesting characters and locations. The problem-solving is most evident in the first game, with some tricky situations at the airport. The gambling at the end is thrown in more for fun than anything else. I think this is better than *Vera Cruz* and most players should find it a lot easier to get into.

BW

FIRST-DAY TARGET SCORE

Escape the hotel

G O O D   N E W S

- ▶ Excellent graphics for characters and locations.
- ▶ Good control over the realistic hotel environment.
- ▶ Nice knotty problems to work out.
- ▶ Three parts should keep you going for a while.

B A D   N E W S

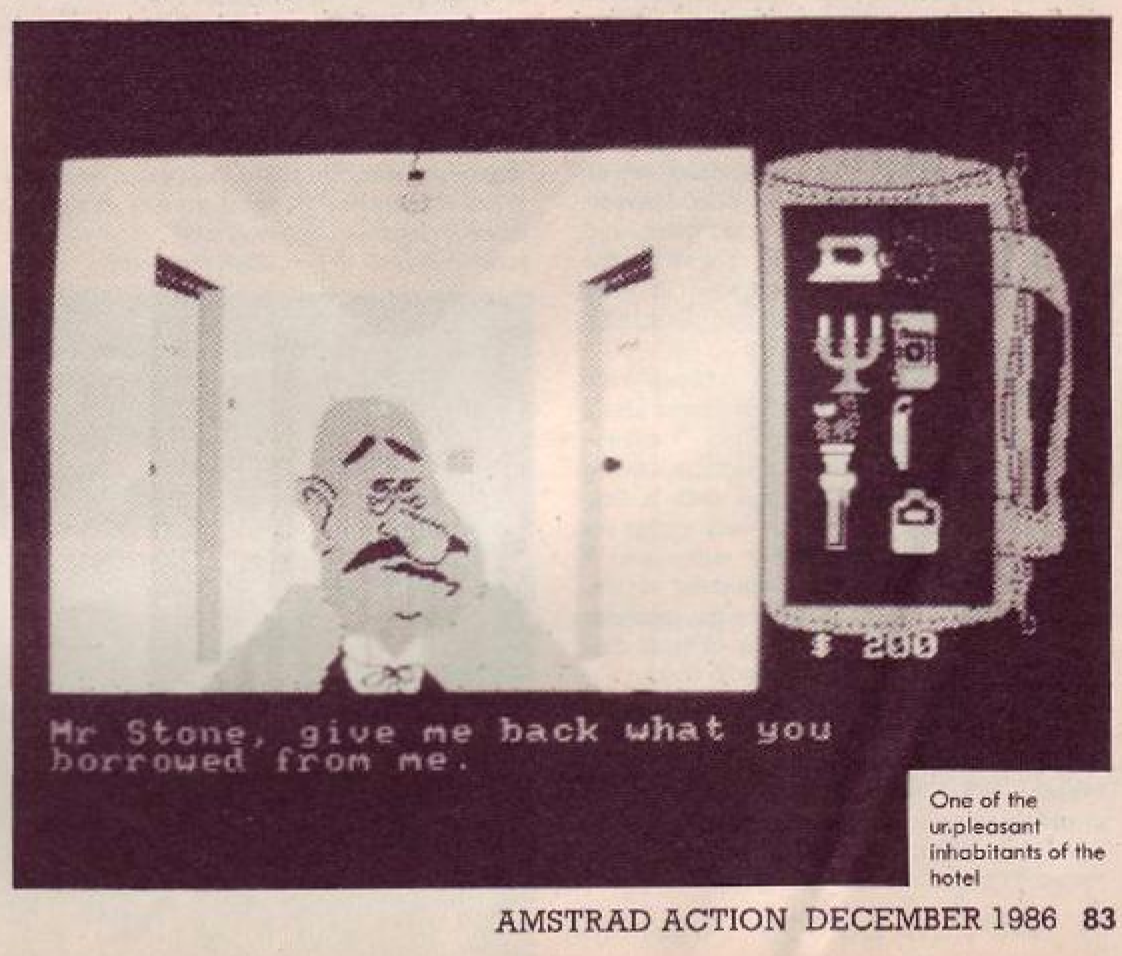
- ▶ You may get a frustrated with the constant need for trial and error.

GREEN SCREEN VIEW

The graphics lose out here, everything looking rather dull and drab. But this does not seriously affect the gameplay.

RpM

GRAPHICS	86%	
SONICS	15%	
GRAB FACTOR	79%	
STAYING POWER	75%	
A A RATING	77%	



One of the unpleasant inhabitants of the hotel

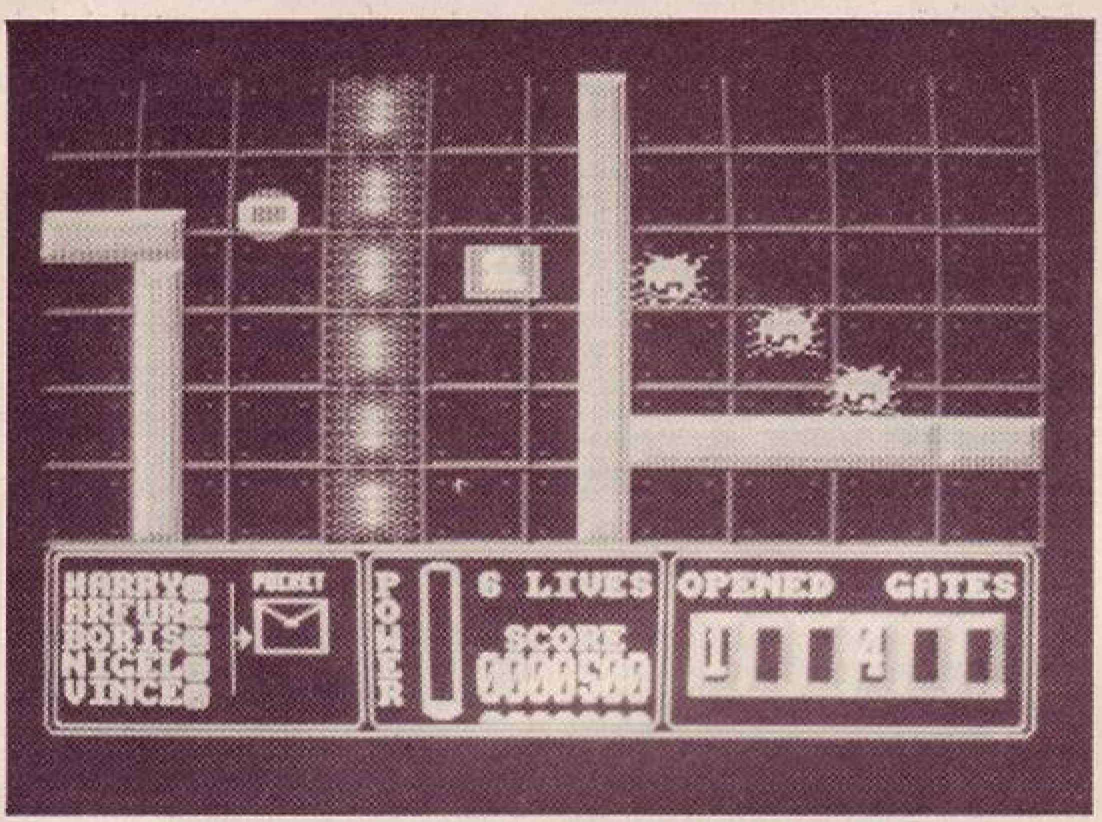
WAR
Martech

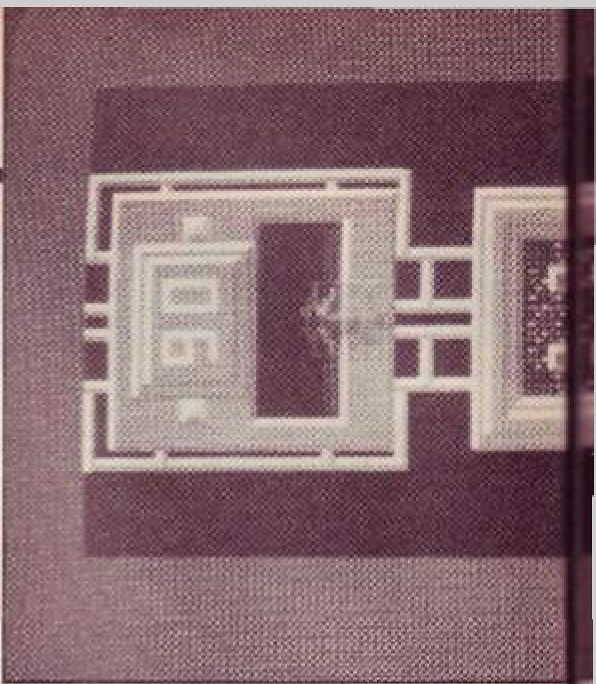
This looks like being a very impressive scrolling shoot-em-up if one or two technical niggles can be sorted out. Unusually for the Amstrad, it's a sideways-scrolling game. This is what's causing the problem at the moment – it's too fast.

You control a ship that skims over the surface of a space station, and have to deal with alien ships attacking (on the demo disk we saw, they hadn't arrived yet).

On the surface of the station are obstacles – be careful not to fly into them. If things get too hectic you can always flip the ship over and fly on the other side of the station, out of harm's way.

If the scrolling is slowed down just enough, and when the alien ships are added in, this will be a very fast-action game and from a genre which is new to the Amstrad.





PULSATOR
Martech

Yet another promising game. The preview disk here was in a much more complete form than Martech's other two. It features some very nice graphics and a lot of intriguing and original elements. It's composed of five levels of 49 rooms each, in which you control a sphere. The sphere has to find and rescue a 'Pulsy' on each level before moving on to the next.

Inhabiting the levels are other spheres that have it in for you by doing nasty things like draining your energy, disabling your gun, killing you instantly and even stealing objects you're carrying. The gun will deal

IKARI WARRIORS
Elite

This is Elite's latest conversion of a popular arcade game and it looks certain to be the best yet from that house. It's an unashamed orgy of violence and destruction that should satisfy the bloodlust of any *Commando* players and provide a tremendous test of anyone's joystick skills.

Looked at simply, it's another downward-scrolling shoot-em-up in the *Commando* mould, but it knocks seven colours of bruises out of its predecessor. You control a Rambo-type character, and you simply have to battle your way up the route ahead, blasting everything in your path. The route takes you over bridges, through swamps and past forts.

Besides bullets, you're armed with grenades, which have a tremendous effect when you lob them into buildings – everything blows up in a mass of debris, taking much of the surrounding area with it. Soldiers are everywhere. As you progress you'll even run into enemy tanks and a helicopter gunship that hammers down-screen at you. Never fear, though, because you can always hop into a tank of your own and carry on smashing away with that.

The games graphics are superb: lots of colour, great explosions, well-drawn sprites, superb scrolling and plenty of variety. What we've seen of the gameplay is pretty impressive too: very addictive as you blast anything that does or doesn't move. This is definitely one to watch for!

WERNER
Ariolasoft

Werner is a German biker who's apparently quite a cult figure over there. If what we've seen is anything to go by, he will soon be pretty popular here too.

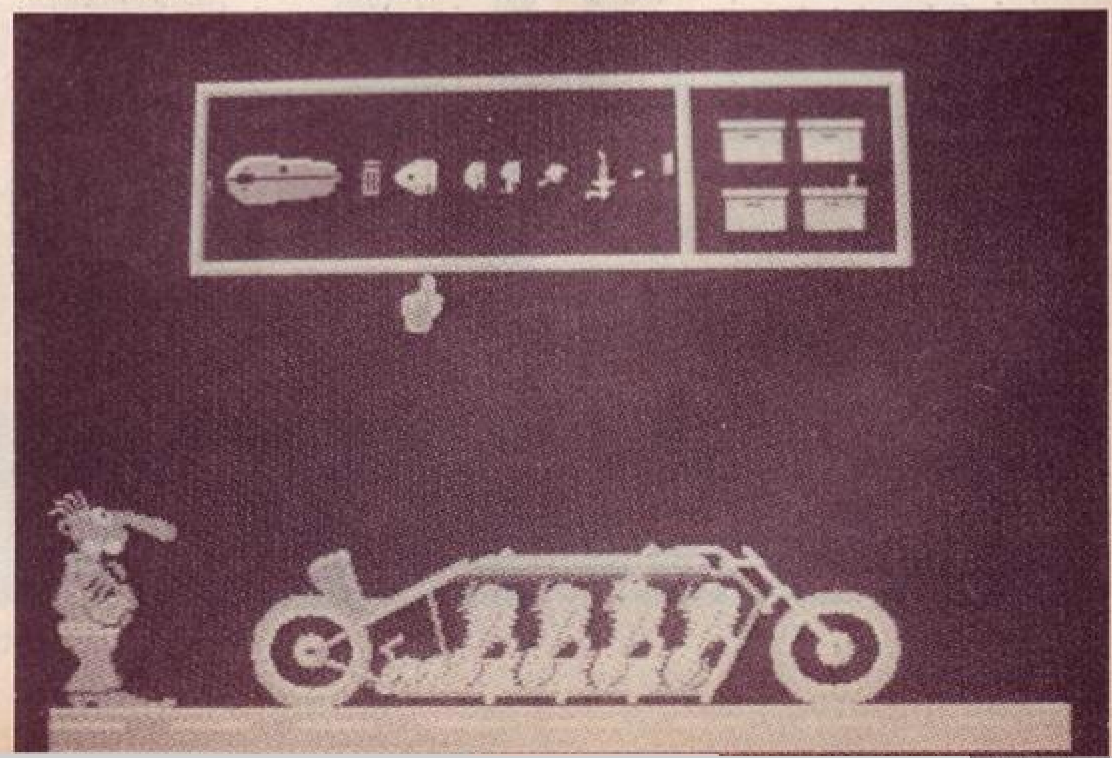
The exact structure of the game isn't clear yet, but it involves building a big, bad custom motorbike and then racing it against some wicked opposition.

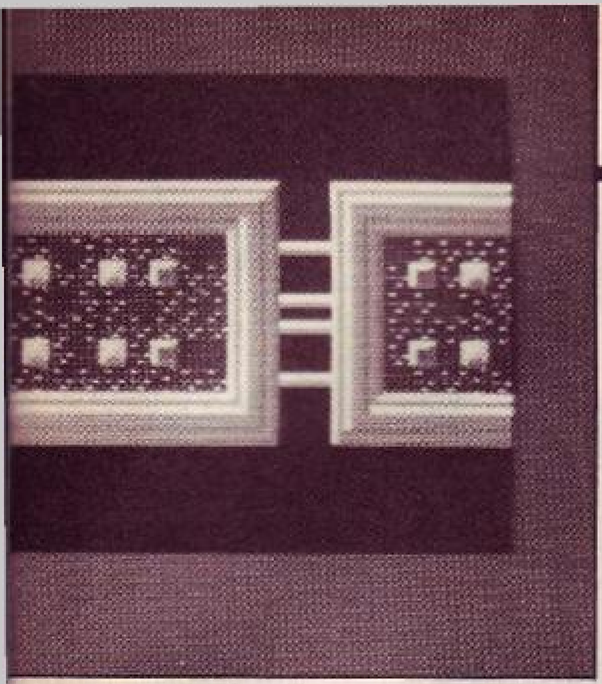
The bike-building section of the preview disk was complete, however. It allows a lot of freedom in what sort of bike you have – from a one-engined chuffer to a four-engined, road-wrecking, car-crunching, wheel-squealing angel from hell. Of course, before you can get down to any racing you've got to get it approved by the cops, who are a very finicky bunch.

The race scenes haven't been completed but the graphics were on show. There were some very interesting bits of animation on Werner. He performs various actions including running, driving, filling up with petrol, getting hit with a pie in the face, and vomiting in the best possible taste.

Other scenes among the demos we saw were an impressive 3D view of driving down the road into fog, and a picture of Werner holding a joystick where he mirrors your every move.

If these hilarious graphics convert into good gameplay, we could be looking at one of the most original and funny hits of the year.





with the baddies if you're quick enough, and one object will give you immunity for a time. There are also static dangers that have to be watched for as they can kill you as well.

The layout of each level is the major problem: it's a maze with code-numbered gates everywhere. You need to pass over a numbered sensor to open a gate, but travelling over it again closes the gate. This means you must work out some contorted routes through one-way corridors and gates while being harried byd various robots.

The gameplay and graphics look excellent. This production should certainly be finished in the very near future, so keep 'em peeled for it.



TARZAN
Martech

Edgar Rice Burroughs' legendary jungle hero has found his way onto computers, and as you can see from our competition he has no intention of keeping quiet about it. Something Martech hopes to put in the game is a digitised Tarzan yell. See if you can do better and win a great prize.

The game is going to be an arcade adventure set in the jungle, ruins and temples where Tarzan searches for his beloved Jane. She's been captured by a tribe of natives demanding the return of their precious gems. Playing the role of Tarzan, you've got to get them back.

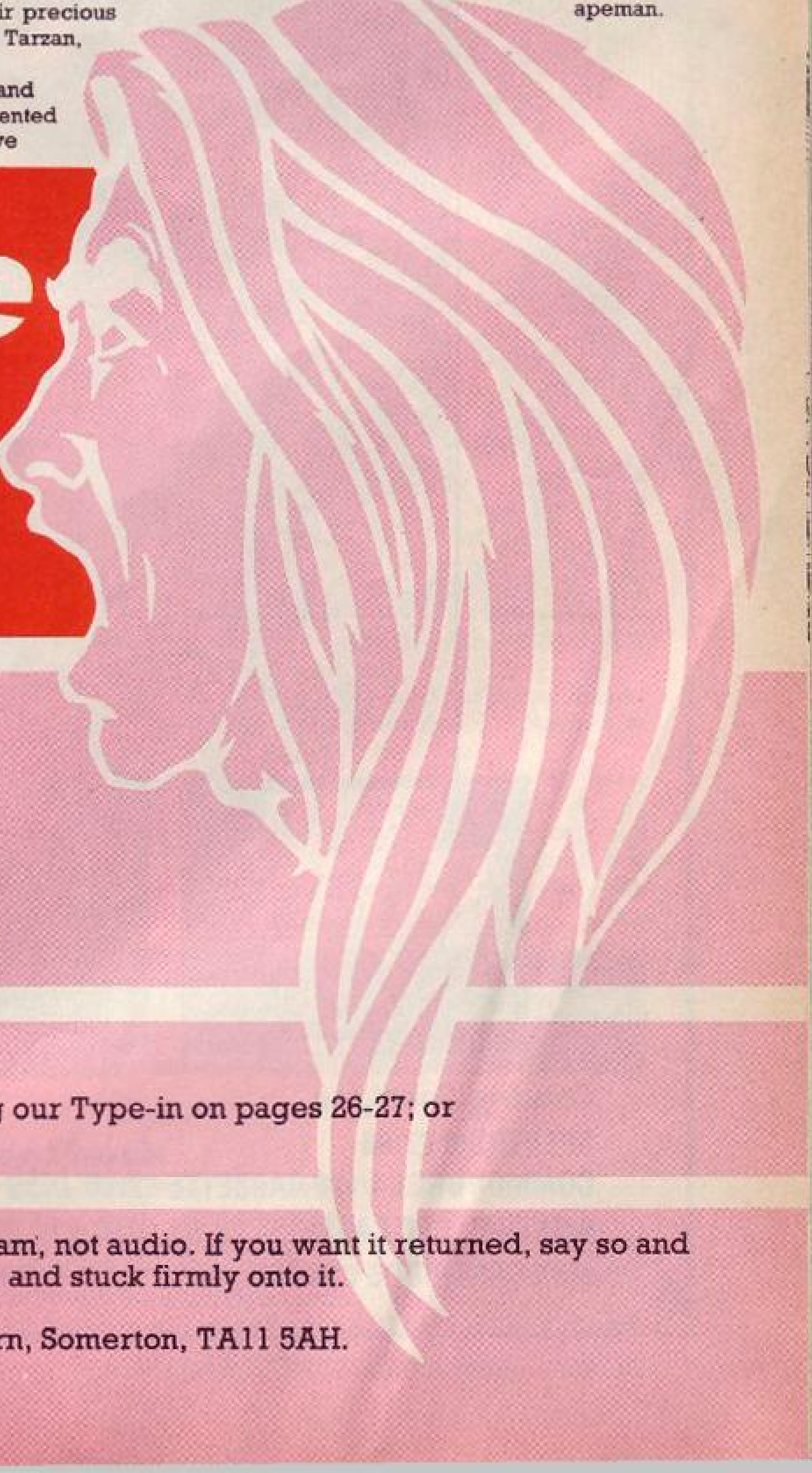
The jungle and other locations are represented in an interesting and attractive screen design. Tarzan can move left and right along paths with picturesque scenery in the background, but also with shadowy objects in the foreground. This creates an atmospheric 3D impression in which most ambitious Tarzans should be very happy.

On his search Tarzan will need to find and use many objects. At one point he even needs the help of a hairy friend. Some of these objects may not be immediately obvious to see or to use, but you'll soon learn when you start picking them up.

The other major feature of the game is the threat presented by the jungle's other wild inhabitants. You'll need well-honed reactions to fight off or avoid all manner of adversaries: big cats, snakes, spear-throwing natives and rolling rocks. You can use combat moves including somersaults, kicks and punches – so there's plenty of room for action.

The gameplay wasn't much in evidence on the demo version we saw, because the various elements are still being pulled together, but the graphics looked good and the rest promises well. Get your lungs tuned up for this one so you can yodel along with the apeman.

Digitize Tarzan



First prize

- a loincloth
- a giant python
- a rubber chimp mask
- a cuddly toy monkey
- and a copy of the game *Tarzan*, from Martech

30 runners-up

- a copy of the game

Your task

Produce a Tarzan yell, by one of two methods:

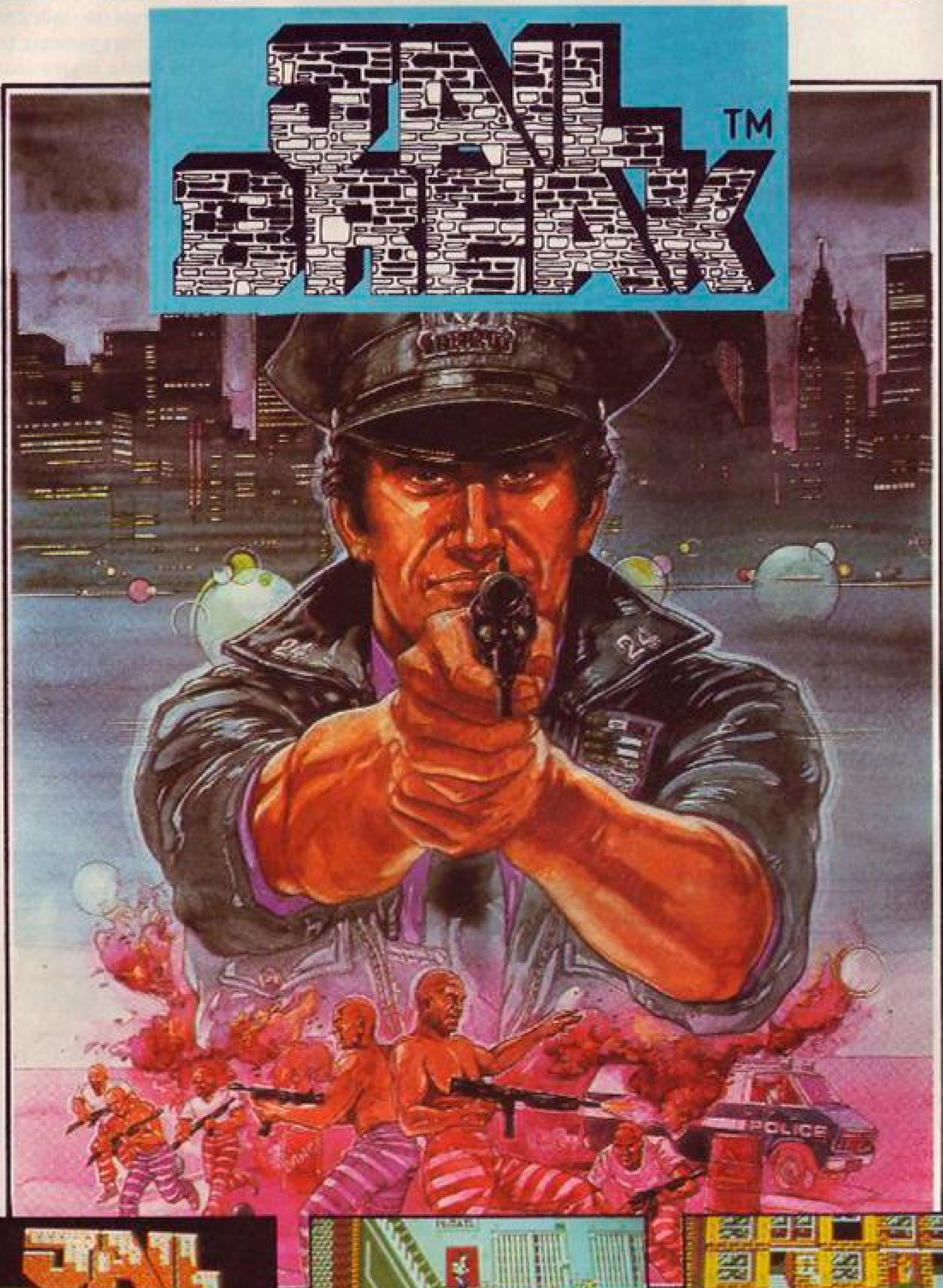
- put a yell onto audio tape, and then digitize it using our Type-in on pages 26-27; or
- produce a program that makes a yell.

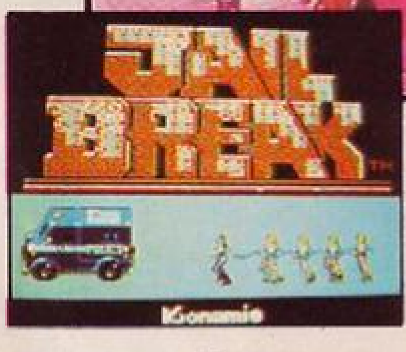
Send your entry on a tape or disk – a computer program, not audio. If you want it returned, say so and make sure your name and address are clearly legible and stuck firmly onto it.

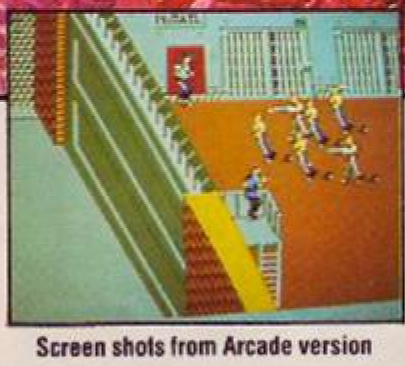
Post to "Tarzan comp", *Amstrad Action*, at the Old Barn, Somerton, TA11 5AH.

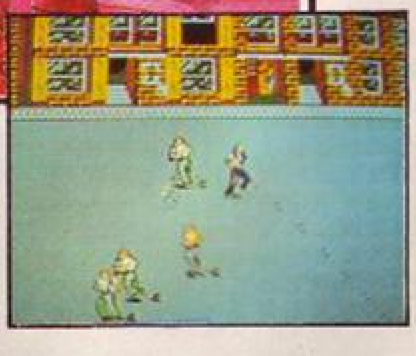
Entries must reach us by 18 December 1986.

The Latest Smash Hit from KONAMI









Screen shots from Arcade version

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ADVENTURE

Now's your chance to get into leather with the Pilg, as the Cowled Crusader worships at the shrine of the Leather Goddesses of Phobos – a new, naughty number from Infocom with three levels of play ranging from TAME to LEWD.

And if that's not enough for you, the man with the rod and staff also takes a day-return to Oz, courtesy of US Gold and Walt Disney, and experiences a debugged version of Aftershock. If you're in trouble, there's another in the occasional Clue Cauldron series, this time for that excellent little budget adventure Kentilla, and a complete map of Heroes of Karn, plus the usual bits'n'tips from the only adventure reviewer in the world who shaves between the toes ...



Leather Goddesses of Phobos

Infocom/Activision, £24.99 disk only

The time: around 3 a.m.

The problem: a dozy Pilg has just awakened, his nostrils flaring with the hideous scent of mothballs, subtly blended with the aroma of a pizza that has matured for months in a public lavatory.

The solution: crawl under the bed-clothes and – Yes! There's your Leather Goddesses scratch'n'sniff card scrumpled up under the duvet.

Yes, my fellow Pilgs, this game has a real scratch'n'sniff card for you to gag over. It also has just about everything else you'd look for in a brilliant adventure. Tricky puzzles, brilliant text, a whopping great pricetag, disk-only specification, and best of all, *three* playing levels.

Playing levels? Yessir! Tame (yawn), Suggestive (hmmm...), and Lewd (ye gods!). And in a game where you must escape the clutches of the maniacal Leather Goddesses who are intent on using you as an unwilling experiment in their hideous investigations into 'How to take over Man (or Woman) Kind', you'll have plenty of opportunity for savouring all three.

The basic aim of the game is to collect a number of objects – which range from a length of hose to a copy of the Cleveland phone book – and thereby construct a machine which will destroy the wicked LGs and save your bacon. 'Tis not an easy game, but 'tis beautifully logical in construction and like all Infocom titles worth every penny of the rather elevated price.

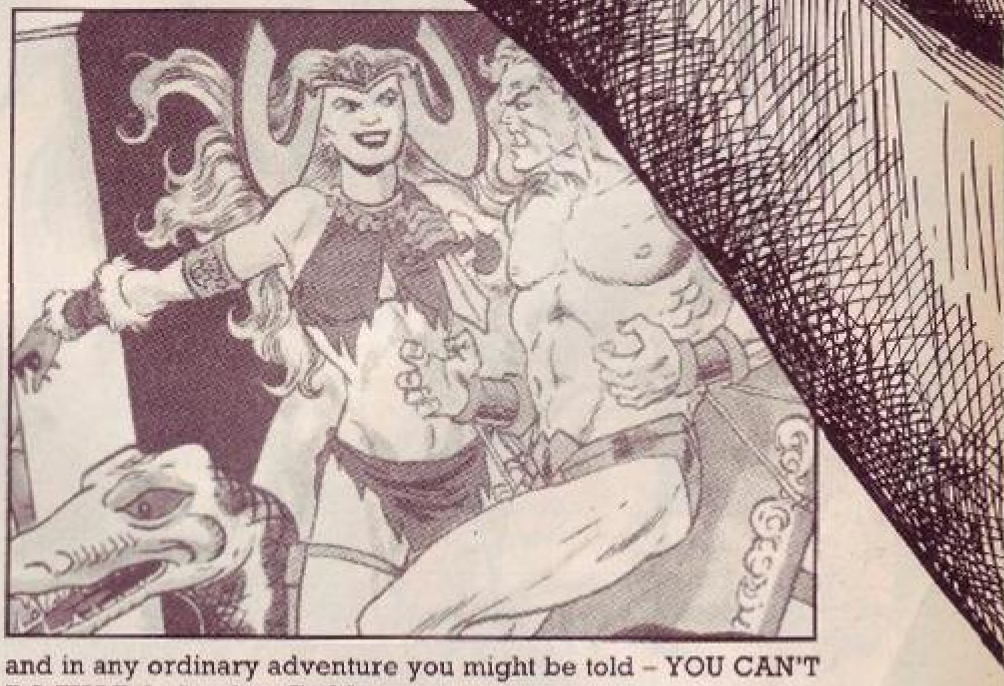
Really this game is so good that I don't know what to say next. Should I tell you about the time I got turned into a gorilla and locked into a cage with a female of that species? Should I tell you about what happened when I, being in the company of the aforesaid lady gorilla, selected the Lewd level of play? No, I should not.

Or should I tell you about the brilliant touches of programming – the selection of your sex, for example. If you enter, at the beginning of the game, the LADIES toilet, you are henceforth female. If you chose the GENTS, you are ... well, we assume you are.

Or should I tell you about the humour? As you struggle with the Mad Scientist who is about to strap you to the bed and carry out some fiendish experiment, you type in desperation: "KILL THE MAD SCIENTIST". And what's the response? "Relax ..." Aaaaaghghghg!

Or should I inform you of the painstaking attention to detail in the (ordinarily) unimportant responses from the parser. For example, you try to TIE HOSE TO SWITCH. Well, you can't – and in any ordinary adventure you might be told – YOU CAN'T DO THAT. In *Leather Goddesses* you get:

'You've tied the rubber hose! In the third quarter, with forty seconds on the clock, the score is rubber hose 17, player 17!!! But seriously, folks, you can't tie the rubber hose.'



Well, seriously, folks, even if you can't tie the leather hose, you better go out and add this one to the collection. It's not only very amusing, written by Steve Meretsky of *Hitchhikers* and *Sorcerer* fame, packed with features, brilliantly designed, and complete with scratch'n'sniff and 3-D glasses – it's also quite disgusting, and all in the best possible taste.

ATMOSPHERE	**91%**
INTERACTION	**93%**
CHALLENGE	**93%**
***AA* RATING**	**91%**

After Shock

Interceptor, £9.95 cass, £14.95 disk

This game was previewed by the Pilg last month but a bugged copy prevented me from getting very far. Now Interceptor have kindly sent me a working version – how does it play?

Well, not quite as well as I'd hoped, I have to admit, though

UCHI-MATA



Based on Judo, UCHI-MATA, is probably the most advanced and challenging martial arts simulation to date.

All the skills 'n' spills – without the bruises!!!

Commodore 64/128	Cassette £9.95	Amstrad 464/664/6128	
	Disc £12.95	Cassette £9.95	Disc £13.95
Spectrum 48/128	Cassette £8.95	MSX	Cassette £9.95



Technical consultant, Brian Jacks, completing a successful UCHI-MATA, one of the many exciting throws incorporated in the game.

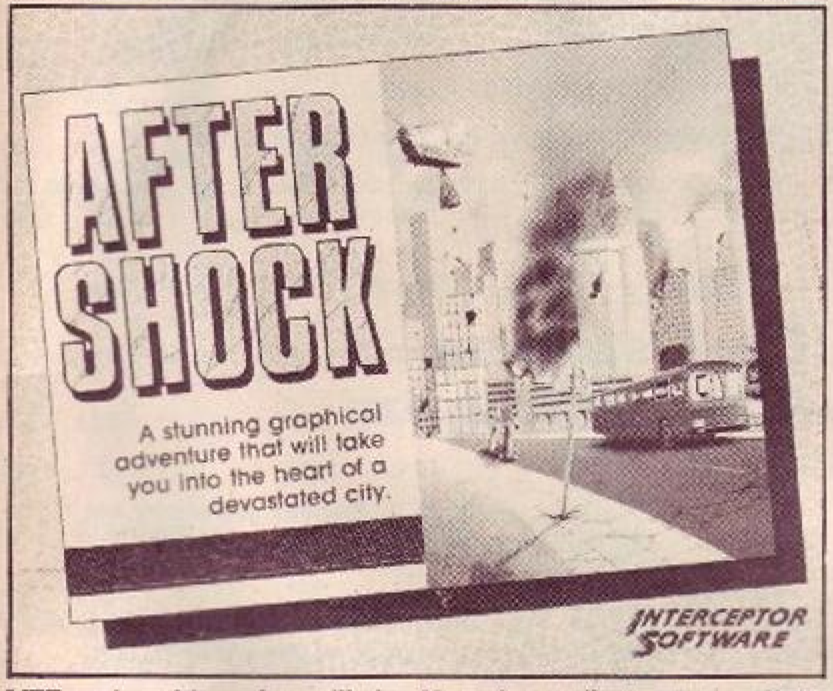
Brian Jacks received his black belt, 1st Dan, when only 15. He is now a 7th Dan, an elite world group. Having won the British Championship eleven times, the Open Championshp five times, the European Championship four times and an Olympic Medal, he is one of the most knowledgeable and foremost exponents of Judo in the world.

martech

there's no doubt that the graphics (and the animation in particular) are superb. Chimneys billow smoke over the shattered city, tankers spill oil, and although the pictures are spread rather few and far between, they do add enormously to the game. Interceptor have really made their name with graphics and this game certainly isn't going to damage their reputation on that score.

However, after you've been playing for half an hour or so, certain weaknesses in the game itself begin to appear. The first is the extreme fussiness of the parser, which makes itself felt right from the beginning of the game. Take this for example: you are caught in a lift and have discovered a panel in the ceiling. Common sense tells you that to escape you need somehow to climb through the panel. Moving, lifting, and pressing the panel have no effect – you have to REMOVE PANEL and nothing else will do.

OK, a bit niggly, but not too bad. But then how do you get out of the lift? The panel's invitingly open, but if you enter UP you're told you 'can't go in that direction'. Nor can you CLIMB THROUGH PANEL, or GO PANEL, or ENTER PANEL, or LEAVE LIFT, or GO OUT or whatever. You have to CLIMB OUT OF THE LIFT and nothing else will do. Now that strikes me as a little hard, and part of a general feeling of weakness in the design of the parser and the vocabulary that also means, for example, that you can't GET objects – you can only TAKE them.



Interceptor have gone to great lengths to answer criticisms of their games – especially over the short location descriptions. Certainly the descriptions in *Aftershock* are much longer than previous titles from this company, but several of them give the impression that they were not written by an inspired author, but rather by someone who kept saying to himself, 'Must have longer descriptions!' and sometimes the length is achieved at the cost of the style.

Similarly, although there are lots of objects about, not many of them are worth examining; in fact most of them are of no use at all in the adventure. This could be a good point, in that the player has to work out which is needed and which isn't – especially since you can't carry much – but it would be nice if they could have more complex roles to play. At one point you can feed the animals in the zoo – a nice touch, but there aren't many more like that.

However, there's no doubt that Interceptor have chosen a good plot idea and the atmosphere of the game is at times quite excellent – especially when you enter the reptile house at the zoo. After playing *Leather Goddesses*, a game like *Aftershock* seems terribly limited and one-dimensional – but that, sadly, is a criticism that could be made of most British adventures these days because of our continued reliance on the limited cassette-based format. *Aftershock* is up with some of the better examples, but let's face it: the standard, with one or two exceptions, isn't that high.

Perhaps you think I'm being over-harsh. If so, please play a few Infocom games and then write and tell me what you think. Even more worrying – play Interceptor's *Heroes of Karn*, which must be all of two years old and then ask yourself how much things have improved since then? Personally I'd rate *Heroes of Karn* over *Aftershock* any day, even if only for style and originality. What do other readers think?

ATMOSPHERE	70%
INTERACTION	62%
CHALLENGE	75%
AA RATING	69%

Return to Oz

US Gold, £9.99 cass, £14.99 disk

TV and film tie-ins have been all the rage in recent months, with *Never Ending Story*, and arcade games based on everything from *Superman* to *Doctor Who*. For the most part they've been pretty dire, but the Pilg had high hopes of *Return to Oz* since it bears the prestigious Disney seal of approval – surely the descendants of Walt would not put their name to anything less than awesome?

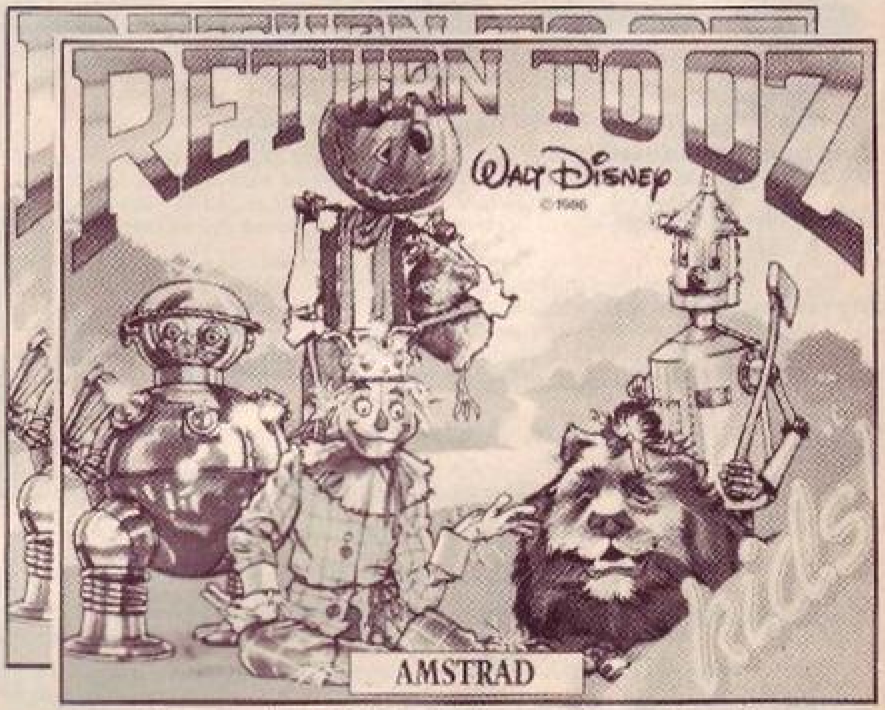
Hmmm ... Well, the fact is that this game is pretty ... er ... Mickey Mouse. The Cowled Crusader polished it off in 38 minutes, which is my current record for solving a game from scratch. But before you pass on to the next review in disgust, perhaps you should ponder awhile some of the innovations and interests of this little gamette.

Return to Oz requires no text input whatsoever. At each stage of the game, the bottom of the screen bears a menu from which, using a combination of the space bar and the Enter key, you select one of six options. These are LOOK, TALK, SEARCH, GET, LIST, and LEAVE.

The aim of the game is to make use of these options to move from one screen-location to another and return to Oz, where things are in a bad way. You must restore the rightful Queen of Oz to her throne, destroy the wicked Nome King, and outwit other nasties in the process.

The game system works very well, given its limitations. For example, you press TALK and on the screen a little square will pick out one of the characters present if you can talk to him. At this point it's worth pressing SPACE to see if the square flips to any of the other characters displayed (if there are any). If it does, then you can choose who you wish to talk to by pressing Enter.

Sounds good, but the actual gameplay is very limited. TALKing, for example, sounds interesting but in fact simply means getting occasional helpful messages from other characters. The other commands are similarly efficient in their operation and selection, and similarly limited in the effects they actually produce.



There aren't very many puzzles in the game, and most of them are solvable provided you have the right object with you.

Since you can carry all the objects in the game simultaneously, and since the program obligingly tells you which one will be effective in each case, you don't have much problem here.

Return to Oz could have been a very enjoyable game for younger players, but I wonder if it isn't just a bit too limited. Certainly any Pilg who's done even a modicum of adventuring would find it very simple fare. The blurb that comes with the program says, 'While the story closely follows the plot of the film, it has been necessarily expanded to make the game more playable and more of a challenge.' If that's the case, I'm glad I didn't bother to see the film.

ATMOSPHERE	40%
INTERACTION	50%
CHALLENGE	8%
AA RATING	28%

Next month shock horror!

Next month begins a major new series, which will take you and the Cowled Crusader into a whole new world of adventuring. Step by step we'll go through the complete process of writing and creating your own game, either in Basic or by using one of the available utilities. There'll be hints and tips on adventure writing, plus the start of a programming project to help you produce a simple but state-of-the-art adventure, complete with complex input and interactive characters.

And what's more, this coincides with a dramatic increase in the size of the Pilg's column, to celebrate the coming of the festive season, the faithfulness of our readers, and the excellence of all things adventurous.

So stay tuned, forget about the bear and follow the Pilg!

Charts go bi-monthly ...

In order to give us more space in future for reviews and other essential items, we'll carry the Adventure Top Ten in every other issue from now on. What's more, this will give you all a chance to get your votes in and possibly qualify for a free game as one of the legendary Lucky Pilgs. Don't forget to post off the form each month to enter the draw, and to ensure that your opinions are reflected in the Pilg's Top Ten.

To the Pilgrim
Amstrad Action
The Old Barn
Somerton, Somerset
TA11 5AH

My favourite three adventures are:

Game **Company**

1

2

3

The reasons for my first choice above are:

The free game I would like if I'm a lucky Pilg is:

My name:

My address (BLOCK CAPITALS ONLY, PLEASE)

Clue Cauldron Special *Kentilla!*

This excellent game was originally released on the Spectrum and has recently been issues as a budget title on the Amstrad. It has some excellent graphics (small but perfectly formed) and some very unusual twists. The game was always one of the Pilg's favourites, partly because it is quite tricky, and partly because of the extremely ... well ... *odd* creatures in the game. Here goes then with some vital hints'n'tips.

Ask Ogeron for the Black Knife – there's no need to kill him.

Dig in the sand and then listen to the shell.

When you go paying social calls to DZ make sure Timandra is with you.

Elva can make a longbow with the right knife.

To enter the castle, rescue someone, reunite him with an old friend, then go to the castle and wait.

Saying 'Kentilla' brings you your sword.

The large Urga-Maul should be searched twice.

Check in the scrub near Grako's tower for a boat.

Elva is good for carrying things.

With creeping shadows, green is OK, red is not.

To kill Grako, hit him with the staff three times, then give it to him.

Clue-sniffing with the Pilgrim

Heroes of Karn
Oil the chest before opening it. Deliver jewellery etc to the cottage. Orion takes you places.

Seabase Delta
Enter 104 and 199. Stick button in with chewing gum (chew it first). Spot disk with telescope, get it with magnet and line.

Secret of St Brides
Type PLANT and see what happens.

Robin of Sherwood
To escape from jail: Go shoulders, grab ankle, strangle guard, search guard, get sword, undo bolt with sword, open grating, go grating, go door, go battlements, go door, go right, go window ...

Adventure Quest
Balrog won't let you pass with the sun-stone, so carry the sword and stone and smite the bridge! The vampire objects to onions. Cool the Dragon's heartburn with something cold.

Dungeon Adventure
Create a slippery problem for the goat. The poppy will help you get past the music.

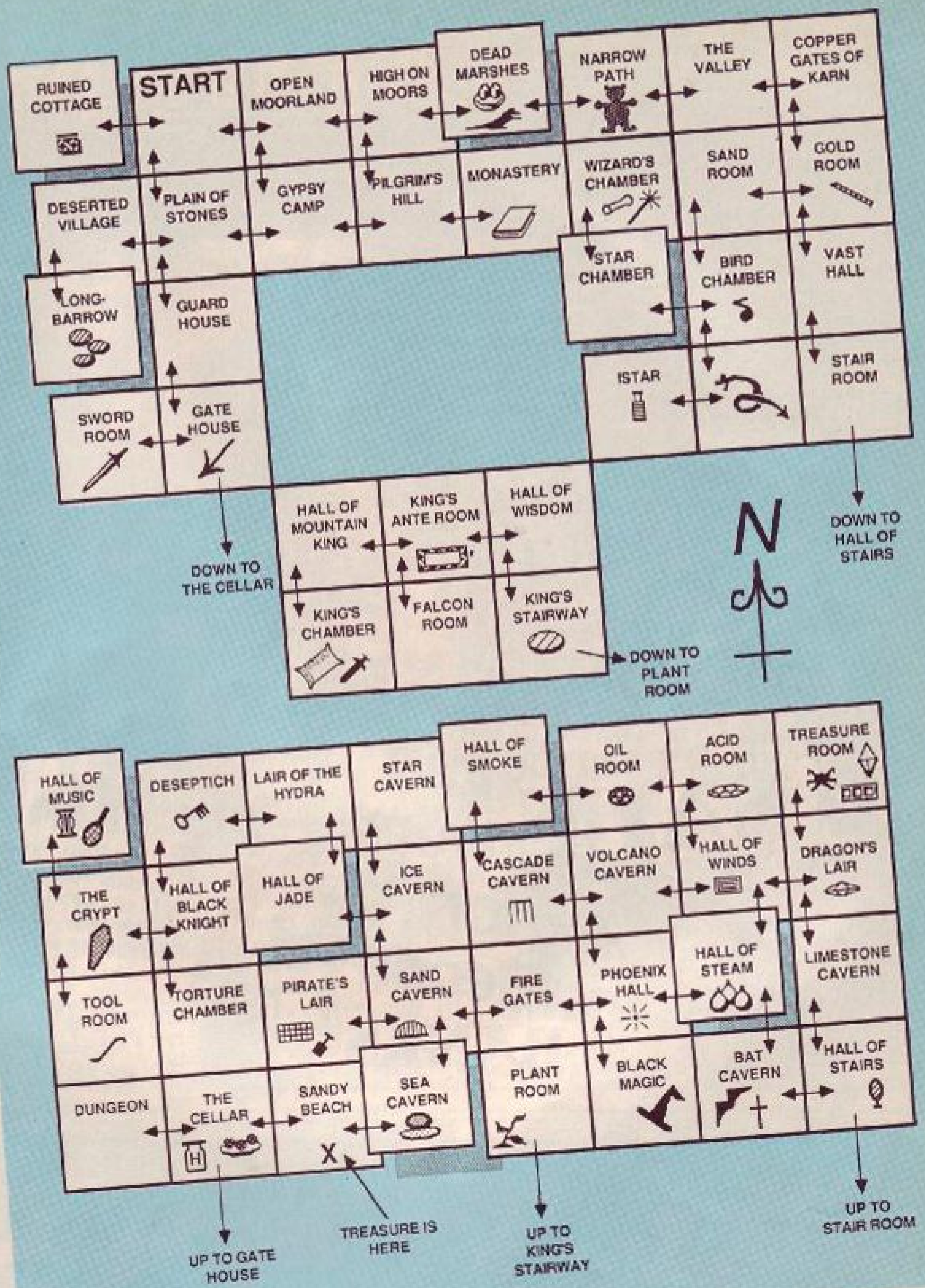
Pilg prize idiocy!

The Pilg has to apologise profusely to one or two prizewinners who have yet to receive their prizes. A house move and two office moves have plunged his personal papers into even deeper disarray than normal and some addresses and details of prizewinners have gone astray.

PLEASE... If you have won a prize, either as a Lucky Pilg or in one of the Cowled Crusader's competitions, and have not received it, then write to me at *Amstrad Action*, with your envelope marked Pilg's Prize Dept. I will then ensure that your prize reaches you without delay. I know that in some cases this will have caused many of you inconvenience and disappointment, and I apologise most profusely if you were one of those affected – just get me your addy!

HEROES OF KARN





Lords & Ladies of Adventure

Competition is hotting up to see who can get their names into this list of immortal beings who have ventured forth into danger and returned to tell the tale. Don't forget – if you want to help others and make friends in the process, then drop me a postcard with your name and address and a list of games you've completed. The Righteous One will then consider you for inclusion. Don't forget to include your phone number if you wish, but bear in mind that you may receive many calls, so check with other members of your household first.

If you're contacting a Lord or Lady of Adventure then please remember to include a self-addressed stamped envelope or, if you're telephoning, to ring at a reasonable hour and *not* at three o'clock in the morning!

Lords and Ladies, on the other hand, please remember that by entering your name in this column you are offering to help your fellows, so deal patiently and efficiently with their enquiries – you will be rewarded with friendship and – who knows? – help when you yourselves need it.

Warlord, Heroes of Karn, Jewels of Babylon, Forest at the Worlds End, Message from Andromeda, Return to Eden, Emerald Isle, Lords of Time, Snowball, Smugglers Cove, Brawn Free
Andrew Walton, Finlow Hill Cottage, Over Alderley, Macclesfield, Cheshire, SK10 4UG

Lord of the Rings, Hobbit, Never Ending Story, Message from Andromeda, Forest at the Worlds End, Jewels of Babylon, Gremlins
Paul Blakeway, 21 Dent Place, Cleator Moor, Cumbria, CA25 5EF

Emerald Isle, Never Ending Story
Graham Pemberton, 37 Hague Row, Park Hill, Sheffield, S2 5SA

Fantasia Diamond, Never Ending Story, Hobbit, Heroes of Karn, Message From Andromeda, Forest at Worlds End, Jewels of Babylon, Emerald Isle, Warlord, Return to Eden, Worm in Paradise, Red Moon, Classic Adventure, Mordons Quest, Dun Darach, Marsport
Tim Gurney, 10 Garwyn Avenue, Roundwood, Meliden, Prestatyn, Clwyd, LL19 8LR

The Hobbit, Twin Kingdom Valley, Heroes of Karn, Castle of Terror, Collossal Cave, The Hulk, Sorceror of Claymorgue Castle, Bored of the Rings, Quest for the Holy Grail, Magicians Ball, Return to Eden, Snowball, Worm in Paradise, Secret of St Brides, Very Big Cave Adventure, Lords of Time, Emerald Isle, Red Moon, Price of Magick, Seabase Delta, Mindshadow, Ten Little Indians, Robin of Sherwood, Gremlins, All Channel 8 games
Phil Symonds, 29 Goliath Close, Roundshaw, Wallington, Surrey, SM6 9HN

Subsunk, Seabase Delta
Martin Coles, 23 Chestnut Walk, Bishopsworth, Bristol, BS1 3RJ

Return to Eden, Worm in Paradise, Emerald Isle, Hobbit, Lords of Midnight, Subsunk
Paul Stagg, 259 Barrowby Road, Grantham, Lincs, NG31 8NR

Colossal Adventure, Forest at the Worlds End, Red Moon, Message from Andromeda, Heroes of Karn
Alex Aird, 139 Bromford Road, Hodge Hill, Birmingham, B36 8HR

Red Moon, Heroes of Karn, Jewels of Babylon, Message from Andromeda, Seabase Delta
Christopher Eng, 14 Amner Road, London, SW11 6AA

Erik the Viking, Adventure Quest, Spytrek, Hunchback the Adventure, Mindshadow, Souls of Darkon
Graham Wheeler, 2 Burford Close, Southdown, Bath, Avon, BA2 1JF

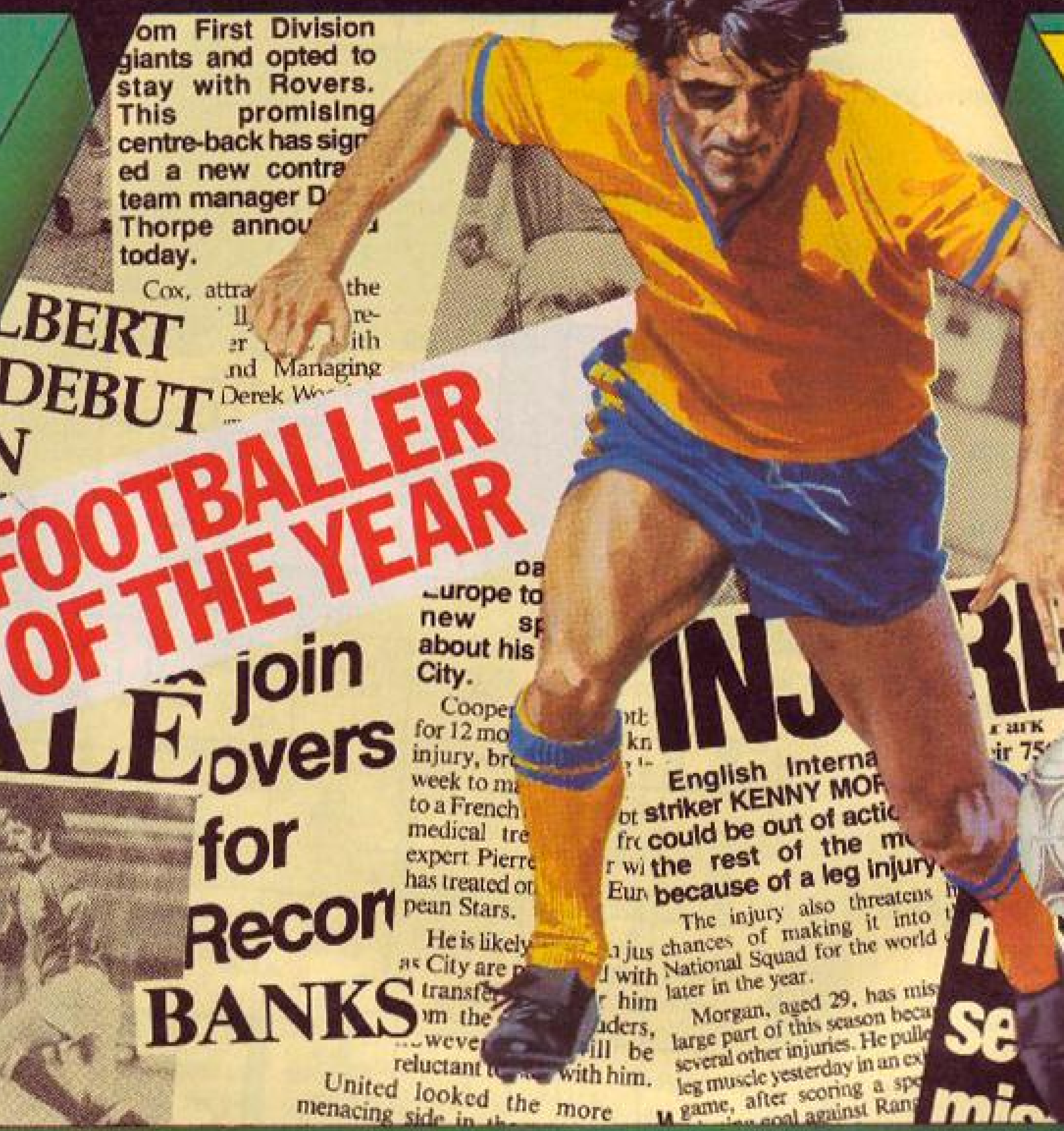
Lords of Midnight, Doomdarks Revenge, Red Moon, Mordon's Quest, The Boggit, Classic Adventure, Heavy on the Magick, Worm in Paradise, Rebel Planet, Kentilla, Seabase Delta, Heroes of Karn, Terrormolinos, Snowball, Lords of time, Valkyrie 17, the Ket Trilogy, Sherlock, Hampstead, Lord of the Rings, Souls of Darkon, Gremlins, Robin of Sherwood, Robin of Sherlock, All Interceptor games, Spellbound, Hulk, Spiderman, Return to Eden
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GREMLIN

ALWAYS AHEAD O

Footballer of the Year

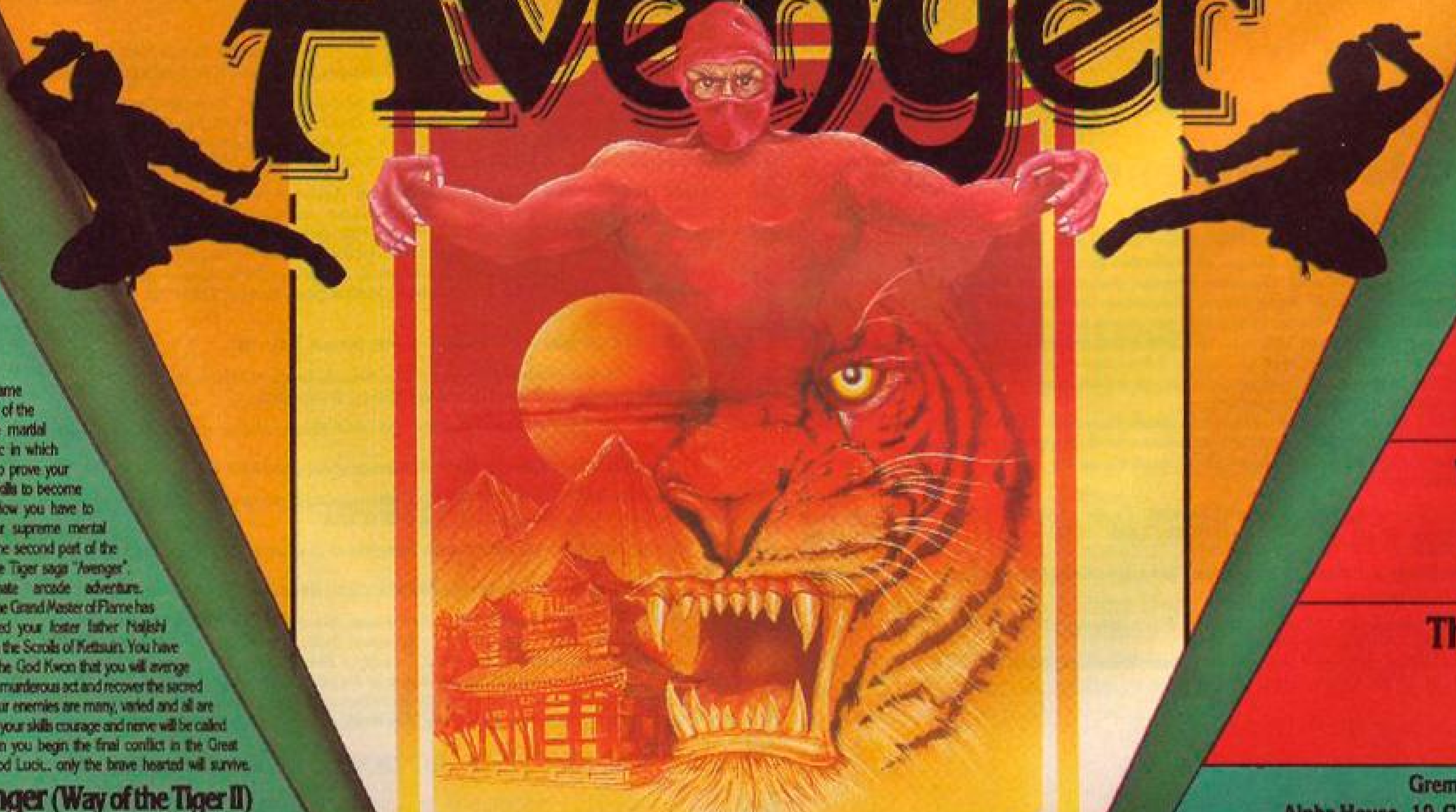
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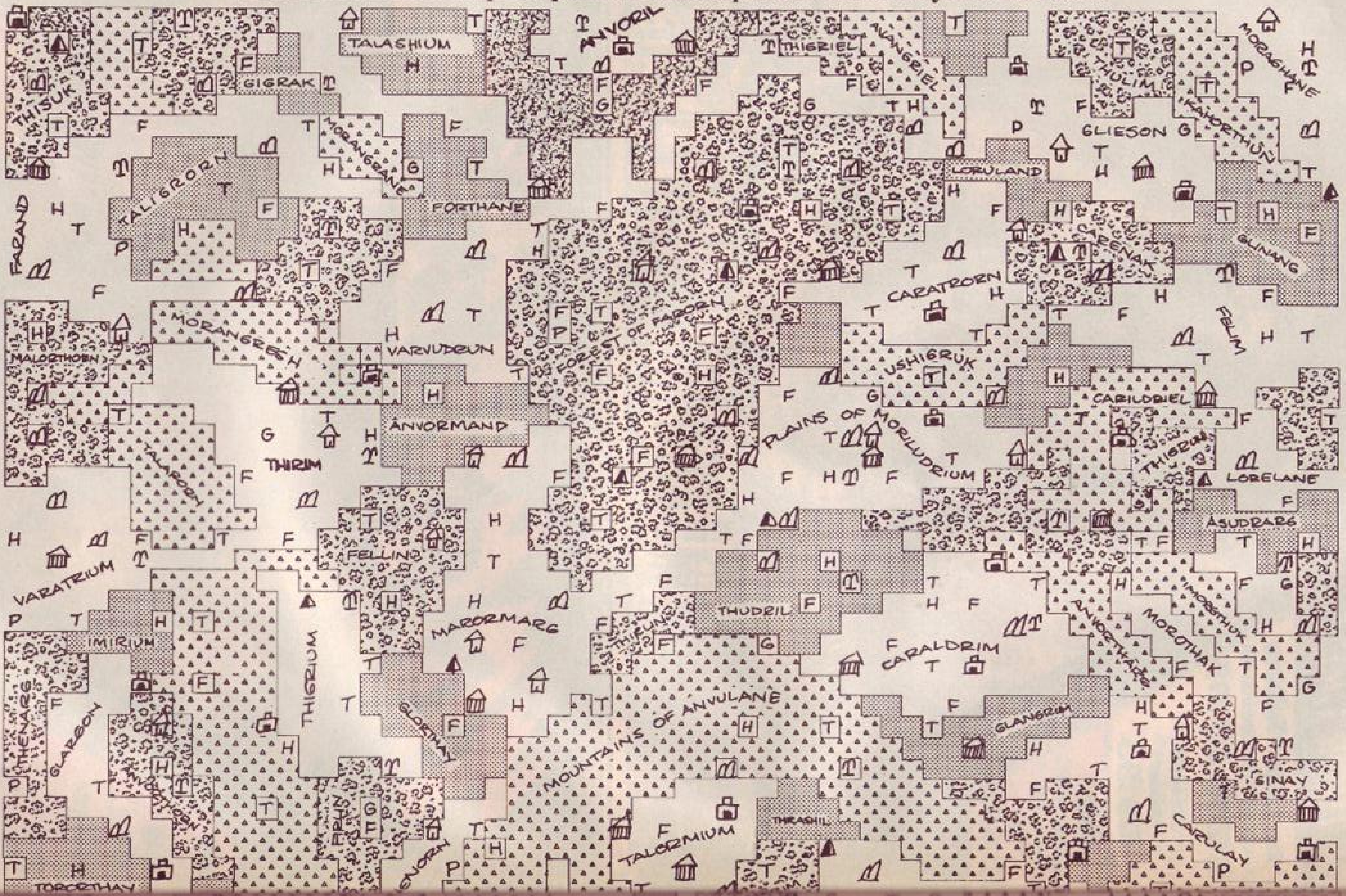
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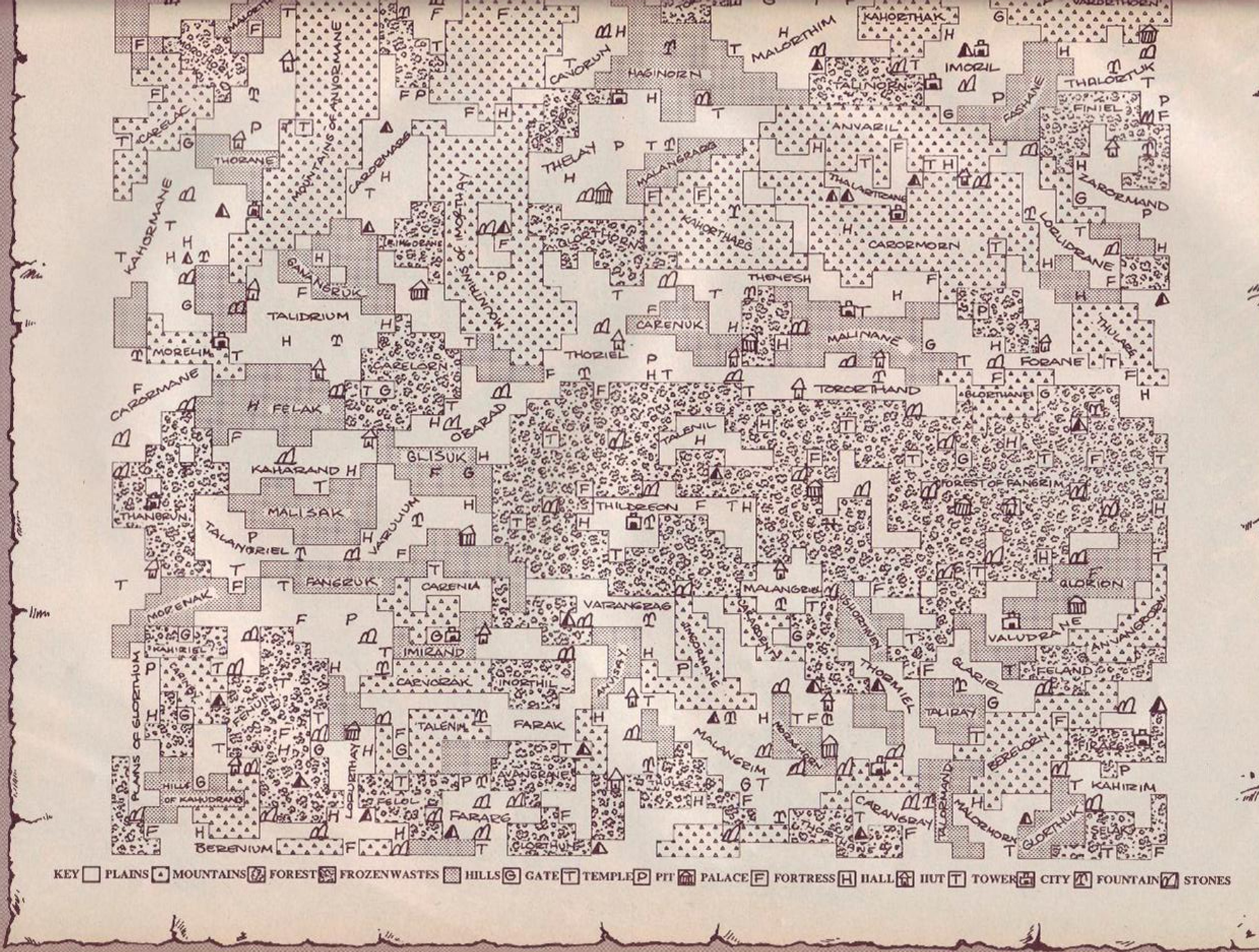
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An Amstrad Action map compiled with the help of James Moloney and Ian Boffin



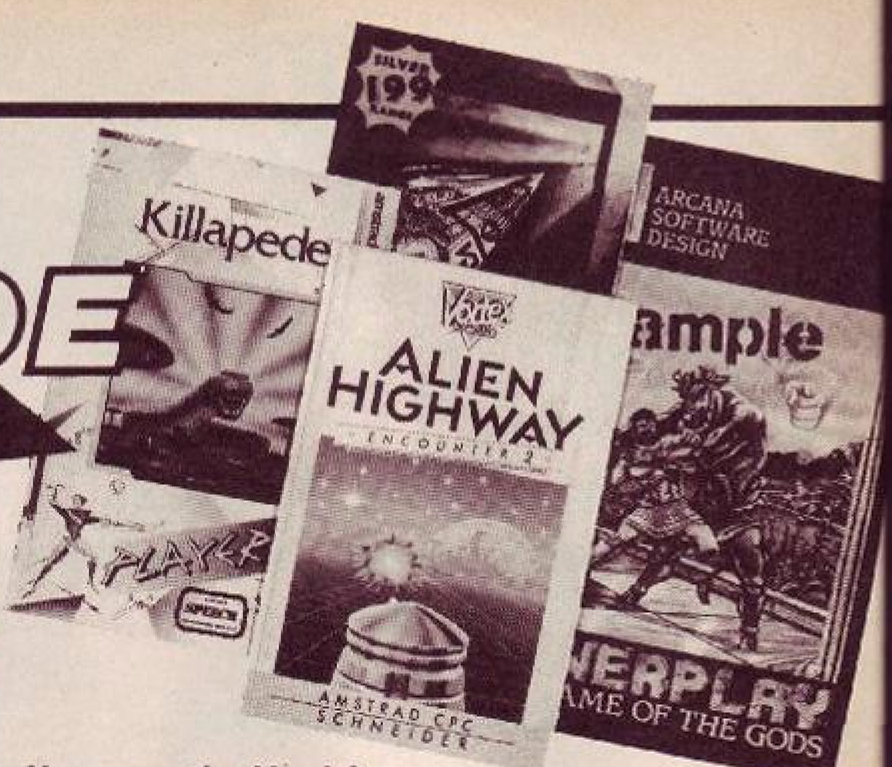


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CHEATMODE



Bob Wade checks out your tips, pokes and game-busting ploys. The best ones could win a entire issue's *AA* Raves! So why not send YOUR latest gem to: Cheat Mode, *Amstrad Action*, Somerton, Somerset, TA11 5AH.

Powerplay

Tony Hoyle of St Annes and Neil MacDougall of Bristol have both come up with pokes allowing you to examine the pre-prepared question files on the Arcana game. Just type in the listing, rewind the tape on side 2 and run the listing. Once the compiler has loaded, you can load one of the quiz files provided and examine it.

```
10 MEMORY &91FF
20 LOAD"compiler"
30 POKE &9289,&BF
40 CALL &9200
```

Killapede

This Method 1 poke from Shaun Bourne of Oldham gives you an awful lot of lives to blast away those insects.

```
10 MEMORY &2000:MODE 1:BORDE
R 26
20 INK 0,0:INK 1,26:INK 2,24
:INK 3,6
30 CLS:LOAD"!screen",&C000
40 LOAD"!killdisc.obj"
50 BORDER 1:INK 0,1:INK 1,1:
INK 2,1:INK 3,1
60 LOAD"!kill.say",&C000
70 POKE &4A14,0
80 CALL &4963
```

Thrust

In addition to our playing guide (in colour – flip ahead a few pages) Phil Howard has come up with his own nifty poke. It's entered using Method 1 and gives you an extra new control over your ship. When in flight you can hit the Ctrl key and it stops the ship dead. It doesn't stop the pod if you're carrying it, but controlling it is much easier once you've stopped.

```
10 DATA 32,46,32,3a,32,32,fe
,56,28,02,14
20 DATA e9,e5,21,3a,01,36,c3
,23,36,26,23
30 DATA 36,be,21,76,36,36,32
,23,36,46,23
40 DATA 36,32,e1,14,e9,21,65
,01,36,c3,23
50 DATA 36,37,23,36,be,3a,37
,bd,c3,3d,01
60 DATA 21,bd,3c,36,c3,23,36
,45,23,36,be
70 DATA c3,1e,32,cd,23,3d,e5
,21,8c,4a,36
80 DATA c3,23,36,5c,23,36,be
,21,5b,73,36
90 DATA 00,e1,fb,e9,c2,15,4c
,3e,17,cd,91
100 DATA 41,c4,49,4a,c3,8f,4
a,21,76,36,36
110 DATA c3,23,36,00,23,36,b
e,c3,00,36
120 y=0:MEMORY &2000
130 FOR x=&BE00 TO &BE77:REA
D a$
140 a=VAL("&"+a$):y=y+a
150 POKE x,a:NEXT
160 IF y<>&29F2 THEN PRINT "
Data error":END
170 LOAD "thrust1"
180 CALL &BE6A
```

Alien Highway

Another cracker from Phil Howard which de-electrifies the road edge in the Vortex game to make manoeuvering a lot easier. It's entered using Method 1.

```
10 DATA 21,63,11,22,a1,11,c3
,40,99,21,e2
20 DATA 39,36,c3,23,36,5f,23
,36,be,21,40
30 DATA 00,e5,21,00,bb,e5,c3
,b7,39,e5,21
40 DATA 75,02,36,85,e1,f1,f3
,c9
50 FOR x=&BE40 TO &BE68
60 READ a$
70 POKE x,VAL("&"+a$)
80 NEXT
90 MEMORY &2000
100 LOAD"alien highway"
110 CALL &BE49
```

Heavy on the Magick

Mike Kennard of Colwinston has some tips for anyone stuck in Gargoyle's animated adventure on how to deal with all those doors.

Doors are opened using keys, gold or a password. If a door has a table near it a key is required; if a table and a double-O sign, gold is needed; if pillars with skulls or wolves' heads, a password has to be found.

Rooms requiring keys have names like room of Pride and room of Claws. These names match star signs found next to the keys. For example Leo the lion matches the room of Pride and Cancer the crab matches the room of Claws.

Elementals are a problem, as they block progress or guard useful objects. To obtain the objects a replacement has to be found. A pellet is replaced by a ball, an egg by a shell, and a nugget by a nougat.

To get past the fire you must carry the salamander clasp. To pass the hydra you must have the snake clasp. Most monsters can be dealt with by blasting but other larger ones require an object to kill them. Use the mirror on Medusa, the pellet on the slug, the slat on the cyclops, the garlic on the vampire and the nugget on the werewolf. If you run into them without the right object the only way past is to transfuse till you have 99 stamina points and then continually freeze them.

Poke methods

Here is how to input the majority of *Cheat Mode* pokes. The instructions for each poke tell you which of the two different methods to use. If you have a 664 or 6128, you'll have to type | tape before typing either.

Method 1

Make sure that you've rewound the game tape to the beginning. Now type in the poke listing. Then type RUN and press the Enter key. (Don't use the key marked CTRL or Control; that would stop the poke from working.) Press the Play key on the cassette deck, and then any key on the main keyboard – the spacebar will do nicely. The tape should now start to play through in the normal way.

Method 2

For this method, you have to skip the first bit of the game program.

To do that, start by rewinding the game tape to the beginning. Now type in the listing.

Then type CAT and press Enter. Start the tape by pressing Play and then any key. Then watch the screen.

After a little while you'll get the message

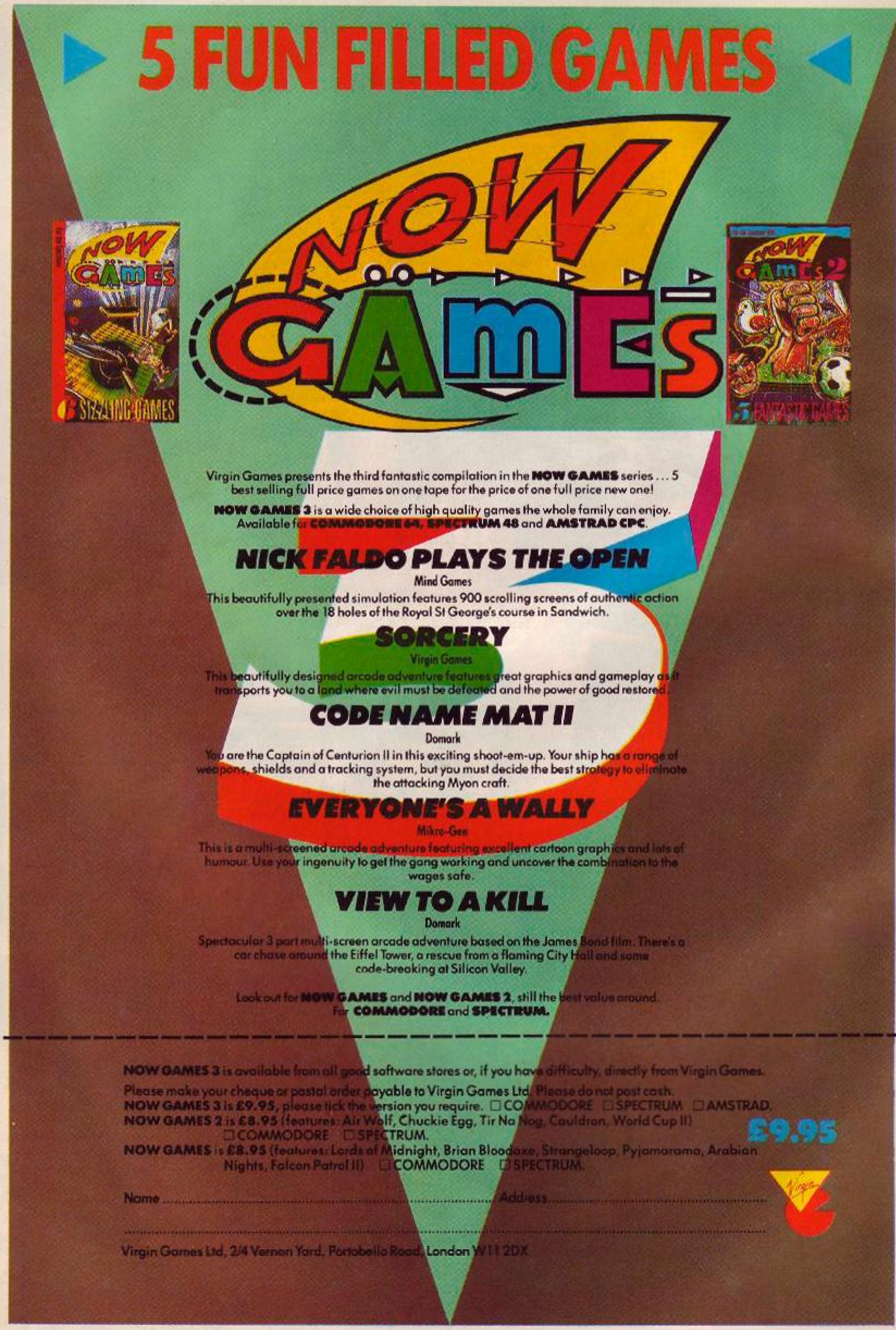
Found *something* block 1.

It doesn't matter what the *something* actually is; this will vary from one game to another. If the instructions with the poke just tell you to skip the first block, you should stop the tape here.

If the instructions tell you to skip several things, stop the tape when the Found message comes up for the last thing you're trying to skip.

Once you've stopped the tape, press Escape, type RUN and press Enter. Now press Play on the tapedeck and any key on the keyboard to start the tape running.


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Jack the Nipper

We've got both disk and tape pokes for the Gremlin game, the disk version coming from our own RpM and the tape one from Phil Doherty of Luton. Type in the disk poke and save it to a separate disk – not the game disk. Once saved you just need to run it and follow the on-screen instructions. The tape poke is entered using Method 1.

Please note that the disk poke actually writes to your game disk and alters it, so ensure the write-protect tab is off or the poke won't work. There is a check in the program that should stop any errors in the data getting through, but you should be very careful when typing it in.

Disk version

```
10 '
20 '      The Write Protect
Must Be Off
30 '  Otherwise The Pokes Ca
nnot Be Entered
40 '
50 MODE 2:BORDER 0:INK 0,0:I
NK 1,24
60 FOR t=&1000 TO &10A2:READ
 a$:POKE t,VAL("&"+a$)
70 b=b+VAL("&"+a$):NEXT t
80 IF b<>12149 THEN PRINT"ER
ROR IN DATA":STOP
90 PRINT"Insert JACK THE NIP
PER disc into drive A and pr
ess a key..."
100 CALL &BB03:CALL &BB06
110 PRINT"Infinite lives (Y/
N) ?"
120 z$=INKEY$:IF z$="" THEN
120
130 z$=UPPER$(z$)
140 IF z$="Y" THEN POKE &104
6,&C3:POKE &104C,0:GOTO 290
150 IF z$="N" THEN POKE &104
6,&C2:POKE &104C,&CD:GOTO 30
0
160 LOCATE 1,1:PRINT CHR$(7)
170 GOTO 120
180 PRINT"Press A Key When R
eady To Play Game..."
190 CALL &BB03:CALL &BB06:|C
PM
200 DATA 21,95,10,CD,D4,BC,2
2,96,10,21,99,10,CD,D4,BC,22
,9A,10
210 DATA 06,02,21,9D,10,C5,0
6,08,3A,93,10,4F,C5,E5,1E,00
,3A,8D
220 DATA 10,57,DF,96,10,E1,C
1,11,0,2,19,C,79,32,93,10,10
,E4,3E
230 DATA 11,32,93,10,3A,8D,1
0,3C,32,8D,10,C1,10,D2,3E,C3
,21,4E
240 DATA 13,77,3E,00,21,BB,2
0,77,23,3E,00,77,23,3E,00,77
,06,02
250 DATA 21,9D,10,C5,06,08,3
A,91,10,4F,C5,E5,1E,00,3A,8F
,10,57
260 DATA DF,9A,10,E1,C1,11,0
0,02,19,0C,79,32,91,10,10,E4
,3E,11
270 DATA 32,91,10,3A,8F,10,3
C,32,8F,10,C1,10,D2,C9,06,00
,06,00
280 DATA 11,00,11,00,84,00,0
0,07,85,00,00,07,00,00,06,00
,00,00
290 POKE &1053,0:POKE &1057,
0:CALL &1000:GOTO 180
300 POKE &1053,&EA:POKE &105
7,&1F:CALL &1000:GOTO 180
```

Tape version

```
10 MODE 1
20 MEMORY 40959
30 DATA 175,50,10,32,62,6,50
,19,32,195,1,16
40 FOR x=48640 TO 48651
50 READ z
60 POKE x,z
70 NEXT
80 LOAD"!nipper",40960
90 POKE 41049,190
100 CALL 40960
```

Monty on the Run

Phil Howard again, folks, with a Method 1 poke for Gremlin's platform/exploration game. This one gives you a whole bunch of lives again – what more could you want?

```
10 DATA 21,b9,9c,36,b7,c3,e9
,82,21,6b,42
20 DATA 36,c3,23,36,07,23,36
,03,21,40,00
30 DATA e5,21,89,03,e5,c3,40
,42,e5,21,36
40 DATA 02,36,05,e1,f1,f3,c9
50 FOR x=&2E9 TO &310
60 READ a$
70 POKE x,VAL("&"+a$)
80 NEXT
90 MEMORY &2000
100 LOAD"monty on the run"
110 CALL &2F1
```

The Apprentice

This poke for the Mastertronic game comes from Nicholas Pavis of Rugby and gives you infinite lives. It's entered using Method 2 to skip the first five blocks named THE APPRENTICE.

```
10 MODE 1:BORDER 0:INK 0,0
20 LOCATE 14,12:PRINT "Pleas
e wait..."
30 FOR a=0 TO 14
40 READ a$
50 POKE &1000+a,VAL("&"+a$)
60 NEXT
70 CALL &1000
80 POKE &9DDD,0
90 POKE &9DDE,0
100 CALL &9E7A
110 DATA 21,ba,12,11,46,92,3
e,2c
120 DATA cd,a1,bc,d2,00,00,c
9
```



Sai Combat

Dan Rodgers of London has some tips for the combat game that he says should allow you to carry on endlessly.

For white- to black-belt opponents you should advance two paces forward and hold a chest kick. When the opponent is near enough, chest-kick repeatedly, never allowing your foot to touch the floor. That should do them all in.

Southern Belle

Andrew Duff of Tain has some tips on the Hewson steam-locomotive game that should help you stay on time.

Firstly as an overall tip it's best to use accelerated time during each journey, as this makes the whole journey from Victoria to Brighton last 12 to 15 minutes instead of an hour.

Starting off is easy, pressing C four times to put the cut-off full on and whistling, then putting the regulator half on (pressing R twice). After a few seconds you will pull out of the station. When your speed is higher than 4 you should press R twice again to put the regulator full on.

Once a speed of around 30–40 is achieved you can ease down on the cut-off, pressing Control-C twice to put it at half. When going downhill very fast put the regulator on half and the cut-off on its lowest position but not off; return to previous settings for normal travel. When climbing gradients the regulator should be full on and the cut-off about half or more.

Slowing down is best done with light or medium braking, but putting on the blower and closing the regulator will also slow you down quite fast. Before entering a tunnel put the blower on and whistle a second or two before entering the tunnel.

Try to conserve as much coal and water as possible throughout the journey, although it isn't easy. As a general rule having no coal and water at 2 or above at Clayton tunnel should see you through to the end.

If you are going very fast (over 70) at Clayton or Patcham tunnels it is best to use light or medium braking, ready for going slowly into Brighton. If you hit the buffers at Brighton at a high speed you will crash. You must stop within 60 feet of the end of the platform – this is tough and you'll need practice to achieve it.

Remember to observe the speed limits and to use the blower and whistle for the tunnels.

For the black belt and all Dan belts you should somersault twice into the middle of the screen and then repeat the routine with the chest kick. When the throwing stars come along the ground, use a flying kick to avoid them, as you will often injure your opponent as well. When the stars come at head height, duck.

Get Dexter

Andrew Mansell of Sharpthorne has a tip for the PSS/Ere game. If you press the Delete key it will pause the game.

Tobruk

Michel Peter Rembo from Brighton has a method for winning on the PSS war game. It hardly tests your strategic and tactical skills but it works.

1. Move all units with a six-movement allowance and surround Bir Hacheim.
2. Move supplies to within six spaces of units.
3. Keep attacking Bir Hacheim with all units.
4. Every move, try to move supplies around a bit so they won't get hit by an enemy air strike.
5. On command phase use all 30 points on air attacks.
6. When it comes to the air attack always bomb Tobruk.
7. After bombing Tobruk three times it will surrender.

Stainless Steel

We gave you the cheat method on the Mikro-Gen shoot-em-up last month and now we've got playing tips from Neil Brown of Lisburn and Keith Weller of Rayleigh. Incidentally, the cheat method has become slightly clearer than holding down the top two rows of the keyboard – try just pressing the keys MIKROGEN simultaneously.

Zone 0: The helicopters need to be hit twice,so make it count. If hit only once they fly all over the place making them difficult to hit. To shoot them just position yourself facing across the road as they approach on the scanner. When they are nearly on the screen, fire a continuous line of bullets across the screen and you should get the necessary two hits. Always use the scanner before venturing up the left side of a row of cars.

When dealing with the metal eyes, try to get them just showing at the top of the screen where they won't normally fire on you. Don't forget that to enter the car at the end of the zone you have to touch the right side of it.

Zone 1: You have to watch your fuel carefully here since the desert section has to be negotiated quite slowly. Stay around at the start for a while picking off the missiles, and keep careful watch on your scanner to see when a missile may be coming up behind you. When you reach the first barrier don't forget to shoot the square droid because you have to destroy all of the enemy to complete the zone.

You can sneak by on the right side of the first barrier and over the starfish on the right of the second barrier. Don't forget you've got to shoot everything and can't get past the wall at the end of the zone.

Zone 2: Bomb the subs until the planes arrive and then pick them off. Try to pick just one sub to keep bombing so you can hit it accurately. When you come across fuel leave it until you really need it because you'll need a lot.

Zone 3: It's much like Zone 0 so just progress through it in the same way.





Nexor

Justin Cole from Colchester has a Method 1 poke that gives infinite lives on Design Design's 3D arcade adventure.

```
10 MODE 1:BORDER 2:INK 0,2:I
NK 1,26:INK 2,15:INK 3,18
20 a=&BF00
30 READ b$:IF b$="end" THEN
40 ELSE b=VAL("&"+b$):POKE a
,b:a=a+1:t=t+b:GOTO 30
40 IF t<>4708 THEN PRINT"Err
or in data":END
50 CALL &BF00
60 DATA 3e,ff,cd,6b,bc,11,00
,01
70 DATA 06,00,cd,77,bc,21,00
,01
80 DATA cd,83,bc,cd,7a,bc,f3
,21
90 DATA 00,c0,11,00,40,cd,92
,01
100 DATA 21,00,12,11,ff,a1,c
d,92
110 DATA 01,af,32,24,39,c3,0
0,20
120 DATA end
```

Fourth Protocol

Barry North of Littlehampton has come up with some excellent tips for the first part of this game of intrigue and deception that should enable you to complete it.

On June 8 you receive a memo asking you to install security systems in the CO Data Analyst building, to which you must reply yes. The basement must be locked in the following way: both computer-room doors, the office and the data storage area. On the ground floor you need to lock the main entrance doors, the desk and key room, the office, the security door and the meeting room. If you carry that out correctly you'll get another memo later on which requires you to decide on the order of importance of the following:

1. Computer audits by system analysts.
2. Special password changed weekly.
3. Special keys to secure areas.
4. Phone calls through human operators.

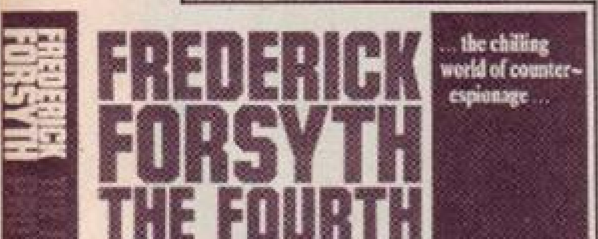
Their correct order of importance is 2431, which should stop hackers getting into the system.

Cencom contains the file Telephone which lists three numbers: Blenheim computer 04382731, medical security 71288989, and Sir Anthony Plumb 12377563. The last number should be used when the player knows all the details about the traitor and his contact. Don't dial it if you aren't sure because you will lose valuable prestige points.

Medical security can be called only after Bracton has called you. Bracton seems obsessed with calling you so read his file along with Thorn's. Blenheim's computer can be called at any time; by giving the decoded password you're given at the start you can transfer files to Cencom, where they can be examined.

Among the files you can get from Blenheim are: Nato, paper 1, paper 2, paper 3, paper 4, paper 5, MoD, Cabinet, Foreign, Abbs, Stanistav, pizza, Maras, Pastemak, Faulkner, Bracton, Thorn, Blodwyn, trad, names, delivery, Nilson, Ompardc, Shoukir and Fox. By analysis of the files papers 1-5, MoD, Cabinet and Foreign you can narrow the traitor down to one of five men who had access to all the documents and a photocopier.

Generally the more watchers you have on a target the faster you get the results. Always answer the phone quickly because some of the calls are very important. Never have watchers on targets that have already been dealt with as it losses prestige points. Some targets such as Warburton and Banister require the full 25 watchers to get results.



Roland goes Caterwauling

Do you remember back in the April issue we printed a spoof hi-score sent in by a reader from Denmark? Well, surprise surprise, James Anderson from Glasgow has sent in a poke for this non-existent game. Just type it in and run it – you won't need to rewind the non-existent game tape or skip any imaginary headerless files.

```
10 MODE 1
20 DATA cd,14,bc,3e,53,cd,5d
,bb
30 DATA 3e,55,cd,5d,bb
40 DATA 3e,43,cd,5d,bb
50 DATA 3e,4b,cd,5d,bb
60 DATA 3e,45,cd,5d,bb
70 DATA 3e,52,cd,5d,bb
```



Starstrike II

Tips for the Realtime game come from P Jolleys of Wigan, who takes you through it stage by stage.

When you start the game you are shown a chart of the systems. If you're a beginner then go for the Beta system, which is relatively easy. Once you've chosen a system, the map of its planets appears. These are split into three types:

Agricultural – These have poor defences and are the easiest of the three. The stages are space gates, fighters, planetary descent and control room.

Industrial – These are slightly harder, consisting of space gates, fighters, ventilation duct and control room.

Military – These are the hardest of the three. They are made up of the space wheel, space gates, fighters, planetary descent, ventilation duct and control room.

Note that sometimes an alarm will sound and a load of coloured rectangles will head for you. They can't be shot so you have to dodge them, but fortunately they don't take much off your shield.

Space wheel: Appears on the screen and moves clockwise. Rotate the ship anti-clockwise and blast the pods off the wheel edge. A door opens; centre the cross-hairs on it and press D. Rotate the ship against the spin of the wheel until the door is horizontal and then keep it there. Once inside blast the fighter and two of the triangles on the far wall. The third triangle stops the iris from moving so shoot it when the iris is fully open and fly out.

Defence shields: There are several different gates you have to negotiate. Each one has a diamond-shaped gap containing squares and triangles. The triangles can be shot but the squares cannot. To pass through safely, head for the middle square firing at any missiles that come from the guns. The middle square is set back from the others; when the others disappear from view you can turn to the side very quickly to avoid the final square.

Orbital insertion: To be on the safe side transfer as much fuel to the shield as possible.

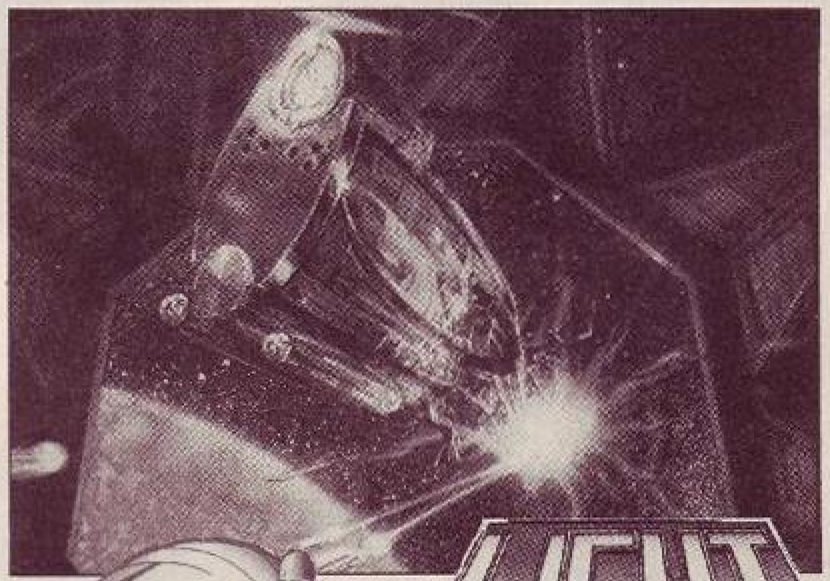
Fighters: It's best to turn your engines off to conserve fuel and keep on the windows (press H). Fighters have to be shot three times before they explode and reveal the fuel pod. To get the pod just keep it in sight and thrust hard towards it beat you. Scavengers need only one shot to destroy them. The number of fighters depends on the strength of the planet.

Ground attack: This is the easy bit. All you have to do here is avoid the moving rectangles, missiles and vertical lasers and blast away at everything else. Go at full speed to save fuel.

Ventilation duct: Stay at half speed and just try to dodge everything. Be particularly careful with the irises.

Control rooms: Each planet has either a reactor or a battle computer. Just shoot it and fly out of the door that opens. Otherwise you return to the ground attack or ventilation duct of that planet.

The easiest system is Beta, then Alpha and Delta. Do Epsilon last: this is the toughest. When refuelling in the module, fill up only your energy bar or you'll never be able to complete the game.



```
80 DATA 3e,21,cd,5d,bb
90 DATA cd,18,bb,c9
100 FOR a=&4000 TO &4000+41
110 READ a$:POKE a,VAL("&"+a
$)
120 NEXT
130 CALL &4000
```

Batman

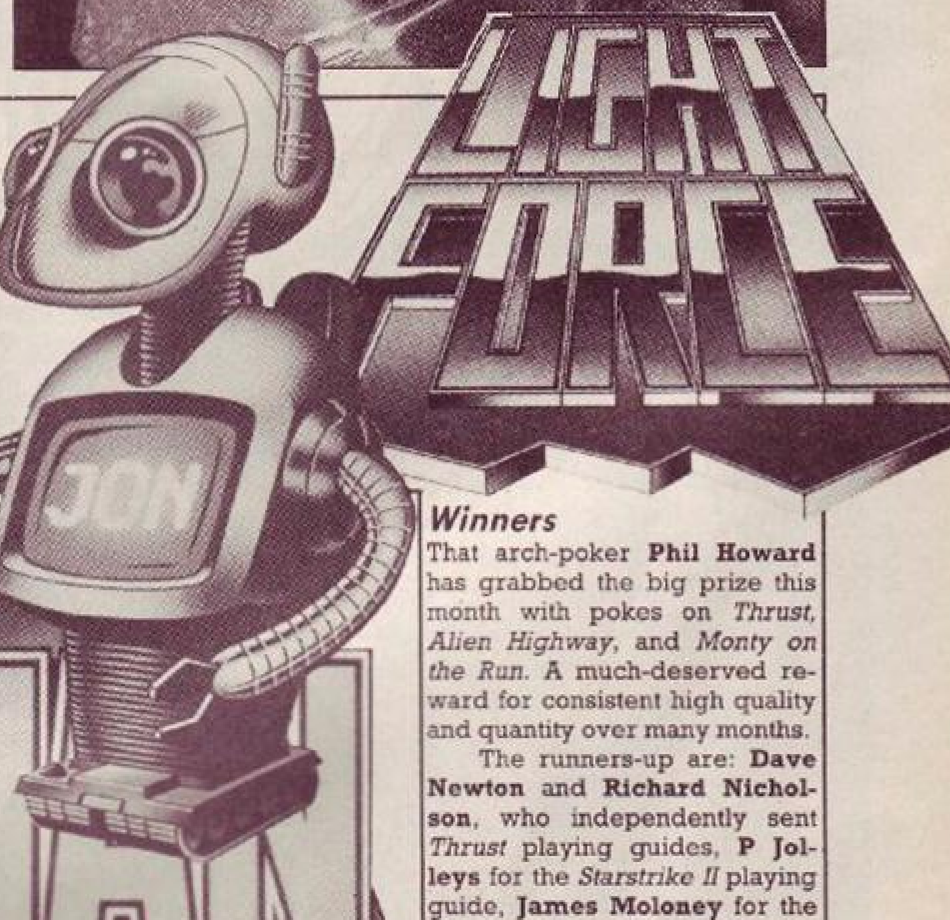
Neil MacDougall from Bristol answers the prayers of all caped crusaders with the disk version. Just type in the listing and save it onto the game disk. Now whenever you want infinite lives just run the listing and it will automatically load the game with infinite lives.

```
10 MODE 1:PAPER 0:INK 0,0:BO
RDER 0:INK 1,6:INK 2,20:INK
3,26
20 LOAD"bat3.scn",&C000
30 FOR x=&BF00 TO &BF2D:READ
 s$:POKE x,VAL("&"+s$):NEXT
40 CALL &BF00
50 DATA 0e,07,11,40,00,21,ff
,b0
60 DATA cd,ce,bc,21,27,bf,11
,00
70 DATA 01,06,06,cd,77,bc,21
,00
80 DATA 01,cd,83,bc,cd,7a,bc
,21
90 DATA 90,1c,36,00,c3,00,01
,62
100 DATA 6d,2e,73,62,66,00,0
0,00
```

December challenges

This month's challenges should keep the mappers happy, so get cracking.

1. A poke allowing you to use chests more than once in *Druid*.
2. A poke giving invulnerability on *Lightforce*.
3. A map of *Frost Byte*.
4. A map of *Prodigy*.
5. A map and playing guide to *Icon Jon*.





Winners

That arch-poker **Phil Howard** has grabbed the big prize this month with pokes on *Thrust*, *Alien Highway*, and *Monty on the Run*. A much-deserved reward for consistent high quality and quantity over many months.

The runners-up are: **Dave Newton** and **Richard Nicholson**, who independently sent *Thrust* playing guides, **P Jolleys** for the *Starstrike II* playing guide, **James Moloney** for the *Doomdark* map, and **Nicholas Pavis** for his *Apprentice* poke and map.

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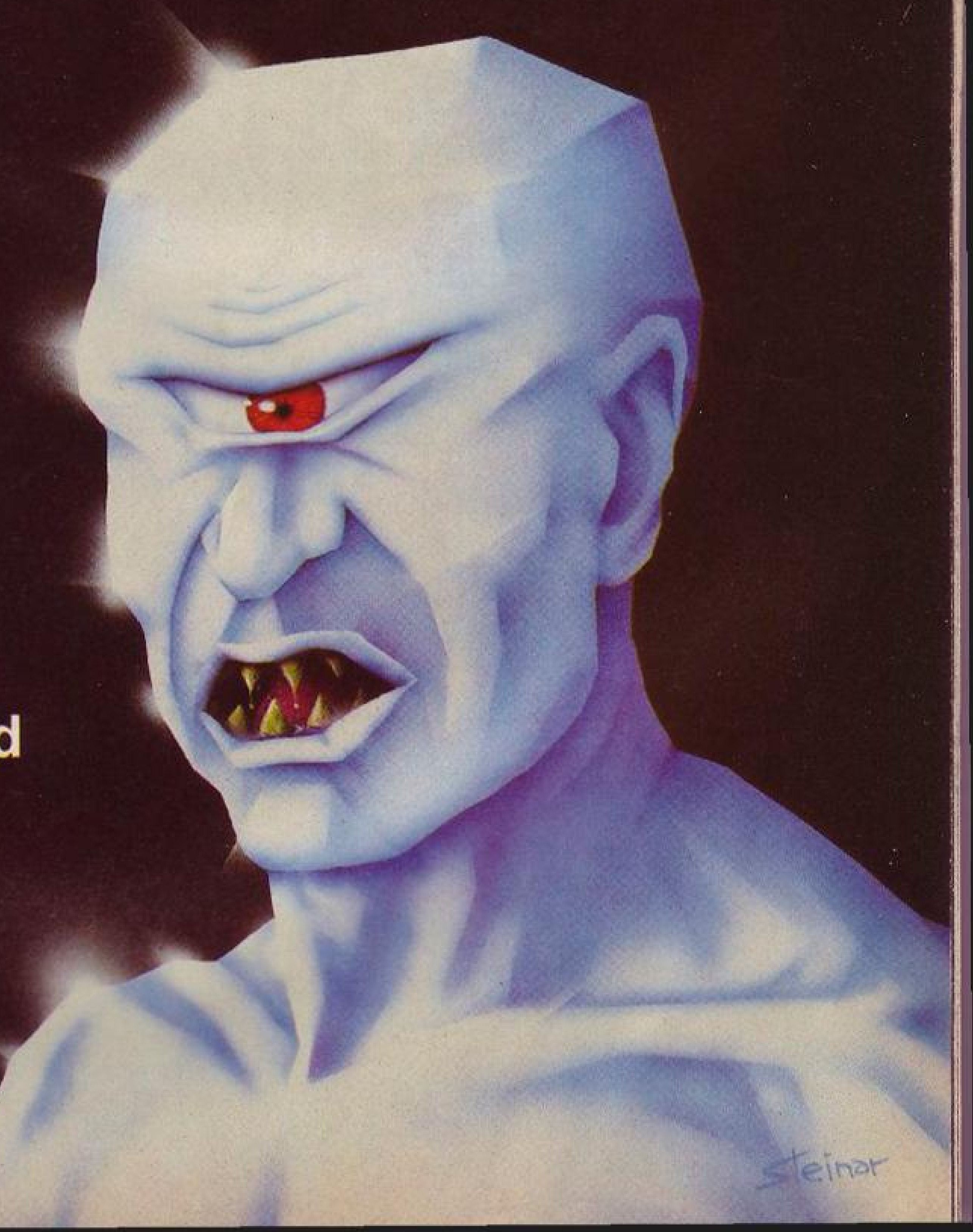
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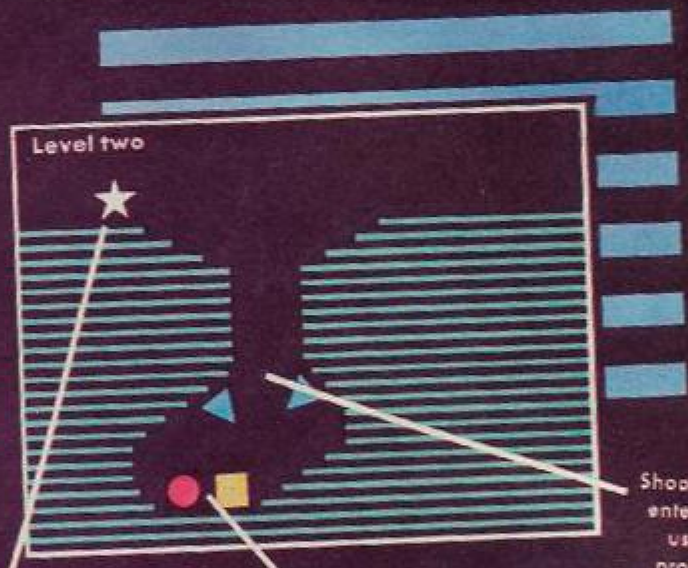
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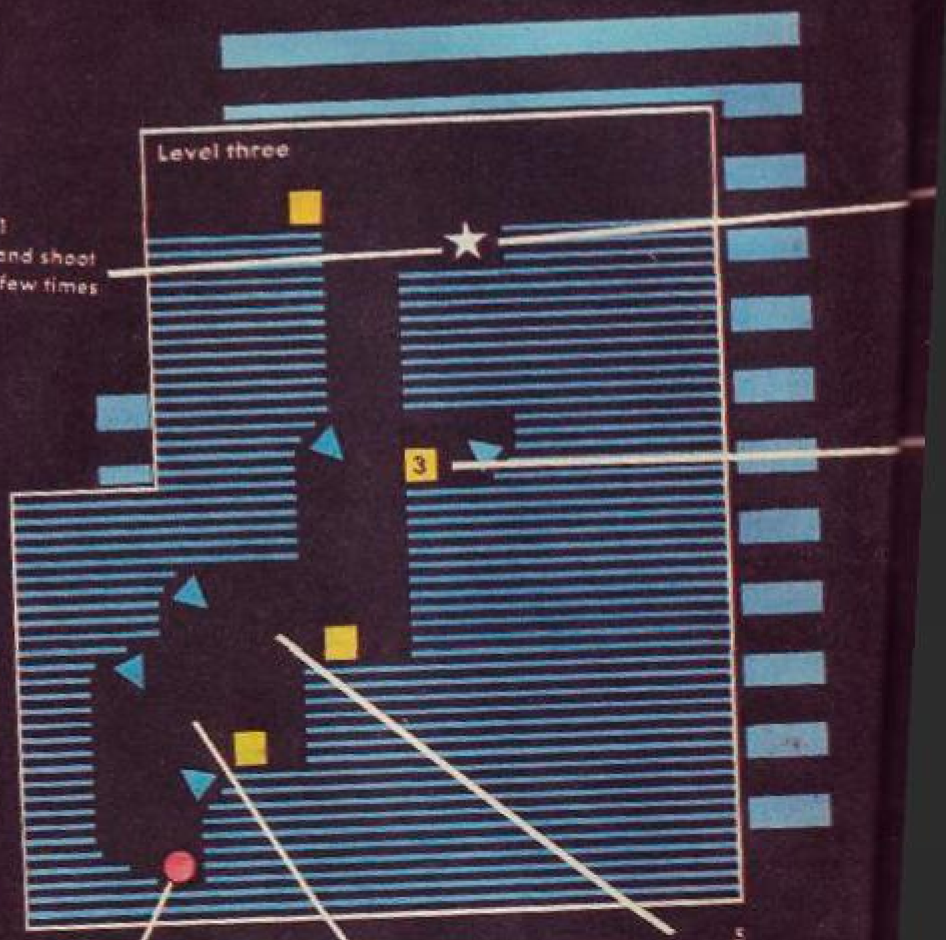


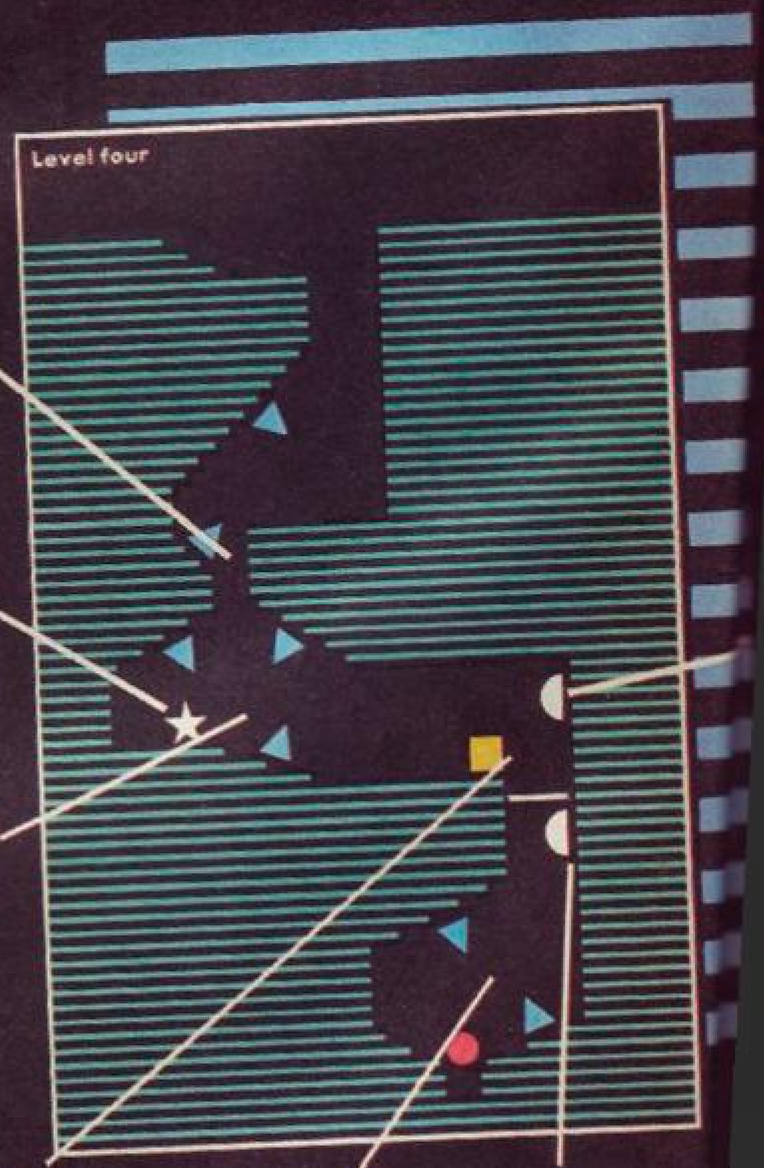
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DAVE NEWTON









General tips

Count the number of shots to destroy a reactor; shoot it two or three times less than that on the way down

Keep the sound turned up so that you can tell if you're hitting a reactor with your bullets when it's off-screen

In reverse gravity, always let the pod precede you through tunnels

Collect all fuel and destroy all guns on the descent

Use shield whenever descending into an area where guns are active

Frequent use of the shield is essential for the invisible sections

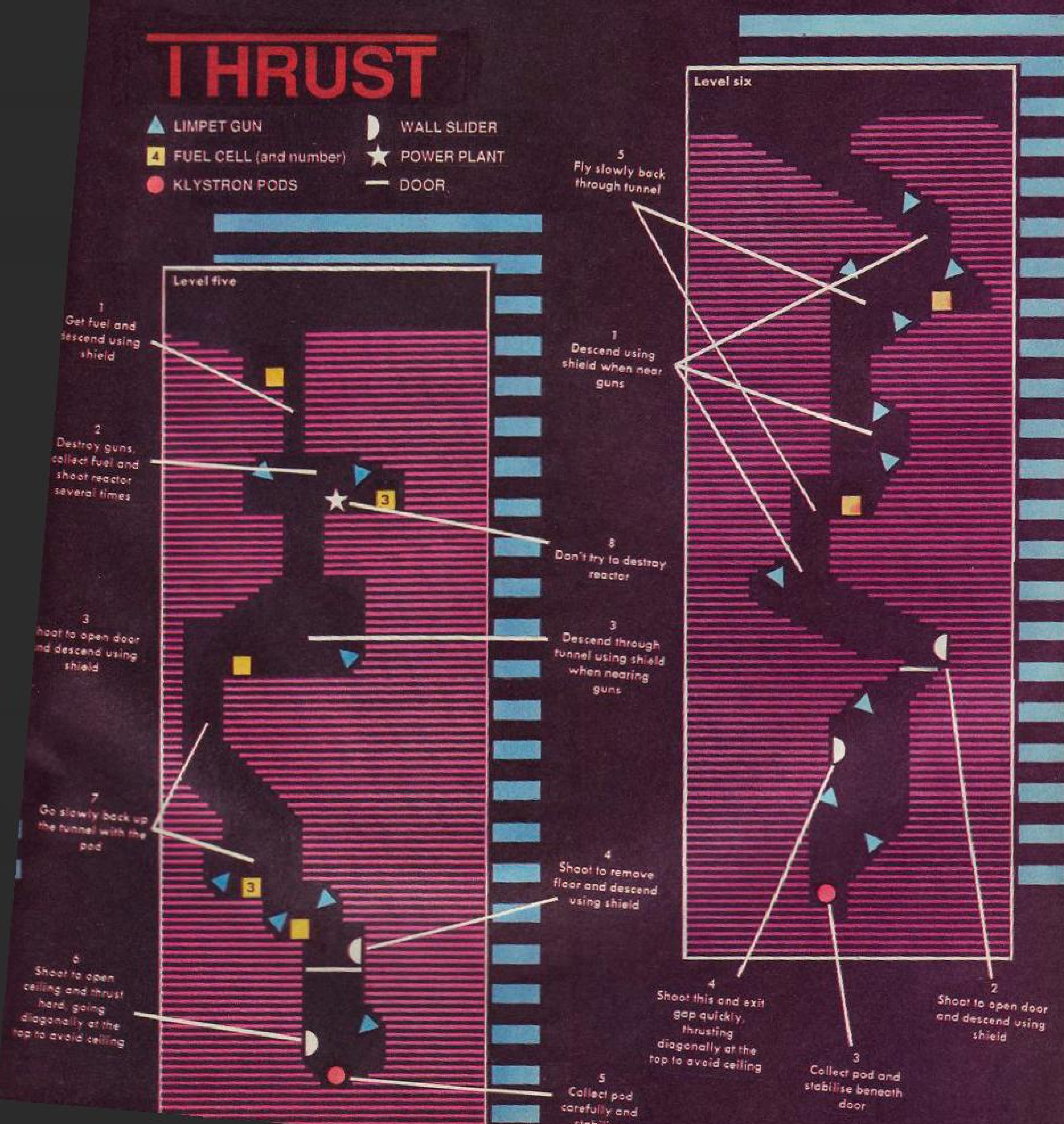
Emmet Masterson and Simon O'Connell have an excellent tip for skipping through levels. Just hold down the 2, 5, 8 and up-arrow keys on the keyboard and press Escape. That will skip you forward one level with a mission-complete bonus.

THR

6
Destroy reactor on
way out

2
Shoot guns before
collecting fuel,
even if you shoot a
fuel dump

THRUST



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This form has been created by the Save-Your-AA-From-Being-Overhacked-Department. You can use it to register your votes for Games and Serious Software, or to send in your Type-ins, without losing any news or reviews.

PLEASE NOTE
You have a TOTAL of 10 votes for each chart to allocate between up to five programs – eg. you can give all 10 to one program or split them say 4+2+2+1+1.

GAME CHART VOTING FORM

I would like to vote for the following games:

GAME	SOFTWARE HOUSE	VOTE ALLOCATION
1.		
2.		
3.		
4.		
5.		

SERIOUS SOFTWARE VOTING FORM

I would like to vote for the following packages:

PROGRAM	SOFTWARE HOUSE	VOTE ALLOCATION
1.		
2.		
3.		
4.		
5.		

TYPE-INS

You can help us out at AA, and give your type-ins a far better chance of being published, by filling out this form and wrapping it around your cassette with a rubber band. It would also be an idea if you send it in a jiffy bag as an awful lot of cassettes arrive here damaged.

Name..

Address..

....

....

....Postcode..........................

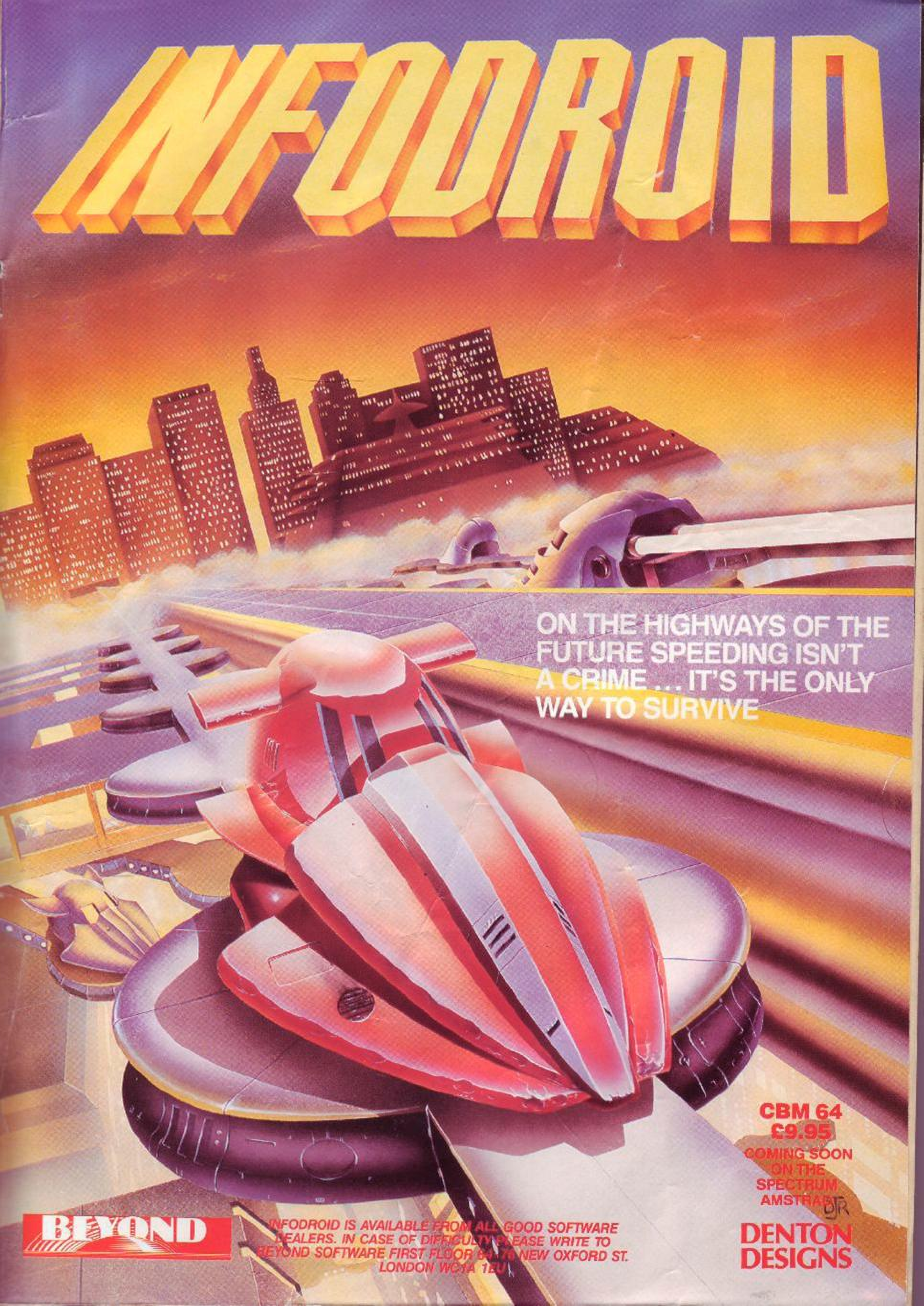
TITLE..

DESCRIPTION:

I hereby declare that the program on the attached tape is all my own work, and that it has not been sent to any other publication, nor been published in any form, or submitted to a software house for consideration as part of a commercial package.

Signed..Date......................................

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